RESOLUTION NO. 2021-11-39R

A RESOLUTION OF THE AMERICAN FORK CITY COUNCIL ADOPTING A STORM WATER MANAGEMENT PLAN.

WHEREAS, The Federal Clean Water Act requires municipal storm water systems (MS4s) to obtain a permit from the Utah Department of Environmental Quality to discharge stormwater; and

WHEREAS, In Utah, storm water discharge general permits are issued through the Utah Pollutant Discharge Elimination System (UPDES) program; and

WHEREAS, For an MS4 to remain complaint with the UPDES general permit, they must develop, implement, and enforce the Storm Water Management Program designed to reduce the discharge of pollutants to the maximum extent practicable from the MS4, protect the water quality, and satisfy the appropriate water quality requirements of the Utah Water Quality Act; and

WHEREAS, the Public Works Department along with the Storm Water Advisory Committee worked to bring the City's the Storm Water Management Plan into compliance with the current permit; and

WHEREAS, the City Council of American Fork City recognizes the responsibility to operate a storm water management system in an environmentally and fiscally responsible manner; and

WHEREAS, the City Council of American Fork City does hereby determine that it is in the best interests of the health, safety, and welfare of the citizens of American Fork City to adopt the Storm Water Management Plan.

NOW, THEREFORE, BE IT RESOLVED, the City Council of American Fork City as follows:

SECTION 1. ADOPTION

That certain document entitled Storm Water Management Plan is hereby adopted together with all charts, maps, plans, attachments, and descriptive and explanatory materials contained therein.

SECTION 2. EFFECTIVE DATE

This Resolution shall take effect immediately upon its approval by the City Council.

PASSED AND ADOPTED BY THE CITY COUNCIL OF AMERICAN FOR, UTAH, ON THIS 9 DAY OF NOVEMBER 2021.

Bradley J. Frost, Mayor

ATTEST:

Terilyn Lurker, City Recorder

AMERICAN FORK CITY CORPORATE SEAL UTAH COUNTY STATE OF UTAH

AMERICAN FORK 18 53

Storm Water Management Program

2021 – 2026

AMERICAN FORK CITY

Permit No. UTR090015

STORM WATER MANAGEMENT PROGRAM

For the permit period of May 12, 2021 to May 11, 2026

Submitted to:

Utah Department of Environmental Quality, Division of Water Quality

Submitted By:

American Fork City
Public Works Department
275 East 200 North
American Fork, Utah 84003
(801) 763-3060

Prepared by:

Franson Civil Engineers
1276 South 820 East, Suite 100
American Fork, UT 84003
801-756-0309

Submitted

November 4, 2021

SIGNATORY PAGE

Governmental Entity Name: American Fork City **Permit number:** UTR090015

Mailing Address: 275 E 200 N

City: American Fork **State:** Utah **Zip Code:** 84003

Storm Water Management Program Responsible Person(s):

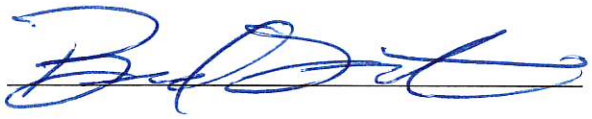
Name: Bradley Frost **Title:** Mayor

Telephone Number: 801-763-3000

Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Bradley Frost

Signature:  Date: November 2, 2021

Title: Mayor

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EXECUTIVE SUMMARY

The City of American Fork is permitted under the Utah Pollution Discharge Elimination System (UPDES) to discharge storm water from its city boundaries to the waters of the United States under the Clean Water Act as amended by the Federal Water Pollution Control Act. Under the municipal separate storm sewer system (MS4) permit UTR090000, American Fork City is required to prepare, implement, and continue implementing a storm water management program (SWMP) with the goal of reducing storm water pollutants from the MS4 community with special emphasis on phosphorus and nitrogen. Under the MS4 Permit, the SWMP focuses on six minimum control measures (MCMs):

1. Public Education and Outreach on Storm Water Impacts,
2. Public Participation,
3. Illicit Discharge Detection and Elimination (IDDE),
4. Construction Site Storm Water Runoff Control,
5. Long-Term Storm Water Management in New Development and Redevelopment (Post-Construction Storm Water Management), and
6. Pollution Prevention and Good Housekeeping for Municipal Operations.

Within each MCM, best management practices (BMPs) and standard operating procedures (SOPs) have been developed to meet the MCMs included in the permit over the last several years and updated for the 2021 submittal. For this submittal, the target audience, target pollutants, justification for selection of the BMP, expected results, responsible parties for implementing the BMP, schedule for implementation, measurable goals, and expected budgets to implement the BMPs have been provided.

Under the permit, compliance is mandatory for the American Fork City. The permit requires the City to provide the manpower, funding, and equipment necessary (resources) (UTR090000 Section 4.1.2.2). Non-compliance with the permit includes the following possible penalties:

- Revocation of the permit and ability to discharge storm water without fines to the MS4.
- Agency fines on a per infraction/per day event.
- Individuals who violate permit implementing provisions are subject to fines not to exceed $10,000 per day of such violation. (UTR090000 Section 6.2)
- Any person willfully or negligently violating permit conditions or the Utah Water Quality Act, is subject to fines not to exceed $25,000 per day of violation. Any person convicted under UCA 19-5-115(2) a second time shall be punished by a fine not exceeding $50,000 per day (UTR090000 Section 6.2).

1.0 INTRODUCTION

American Fork City has prepared this Storm Water Management Program (SWMP) plan as required by UTR090000 published by the Utah Division of Water Quality (DWQ), Department of Environmental Quality. This permit was issued to municipal separate storm sewer system (MS4) cities as required by the Utah Water Quality Act, Title 19, Chapter 5 of the Utah Code Annotated as amended and the rules and regulations made pursuant to those statutes. This SWMP is also compliant with the requirements of the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et. Seq. as amended to date).

American Fork City is located in Utah County. The City is a Phase 2 community with a current population of approximately 35,000. It is part of the Greater Provo-Orem Metropolitan area neighboring Lehi, Highland, Cedar Hills, Pleasant Grove, and Lindon, with Utah Lake to the south. With the city population growing by over 30% since the 2010 census and averaging over 3% annually, development of residential, industrial, and commercial property continues rapidly, particularly South of I-15. As development continues, storm water issues are becoming more relevant. Increased development by default reduces the area for rainfall and snowmelt to infiltrate into the soils by replacing those areas with impervious surfaces (surfaces that don't absorb or infiltrate water) like roofs, concrete, and asphalt. This causes an increase in the amount of surface runoff that American Fork City must manage.

This increased runoff causes a potential increase of contaminants that may be collected and carried away by the runoff. The dense vegetation typically associated with agricultural land—particularly the grass hay, pastures, and alfalfa fields—act as natural filters to remove sediments and pollutants from the storm water runoff. As these agricultural lands are replaced with asphalt, concrete, roof tops, and landscaping, many of these natural treatment capabilities have historically been replaced with direct discharge pipes leading to ditches, rivers, streams, wetlands, and Utah Lake.

In 2020, American Fork City, in conjunction with Franson Civil Engineers, prepared a detailed Storm Water Master Plan to address the flooding and water quality issues throughout the city. The Master Plan also serves to develop a capital improvement plan to address the impacts of future development and redevelopment (MCM #5) as well as improvements and modifications to city-owned infrastructure (MCM #6).

American Fork City has updated and amended its SWMP based on the results of the Storm Water Master Plan, an audit previously completed by the Utah DWQ, and a detailed review by American Fork City staff of areas where the greatest benefits to the city can be achieved while meeting the requirements of UTR090000. This document has been organized to facilitate this effort and follows the numbering of the permit.

2.0 STORM WATER MANAGEMENT PROGRAM REQUIREMENTS

2.1. New Applicant [N/A]

This section is not applicable [N/A].

2.2. Notice of Intent [N/A]

This section is not applicable; American Fork City submitted a notice of intent (NOI) at least 180 days prior to the expiration date of the previous Permit.

2.3. Storm Water Management Program Plan Description for Renewal Permittees

This SWMP consists of the following information:

- American Fork City's MS4 Permit Number is UTR090015.
- American Fork City is located in northern Utah County, at the north end of Utah Lake being bisected by the American Fork River, and is surrounded by the cities of Lehi, Highland, Cedar Hills, Pleasant Grove, and Lindon. Major roads include I-15, State Street (US-89), State Route 145, and State Route 74. Figure 2-1 shows the location of American Fork City in relation to neighboring cities, as well the major roads and significant rivers, drains, or sloughs.
- American Fork City's storm water management program organization chart is shown in Figure 2-2.
- Information about impaired waters (as defined by Utah DWQ) and the requirements under consideration for Utah Lake.
- Specific efforts for the reduction of nitrogen and phosphorus.
- A summary of the target pollutants identified in the City's system.
- A status summary of the compliance with each MCM and a compilation of best management practices (BMPs) based on the requirements of UTR090000 in each of the six MCMs.
- An annual implementation and maintenance budget estimate for each BMP for each calendar year of the permit, 2022-2026, recognizing that permit years and City fiscal years are not concurrent.

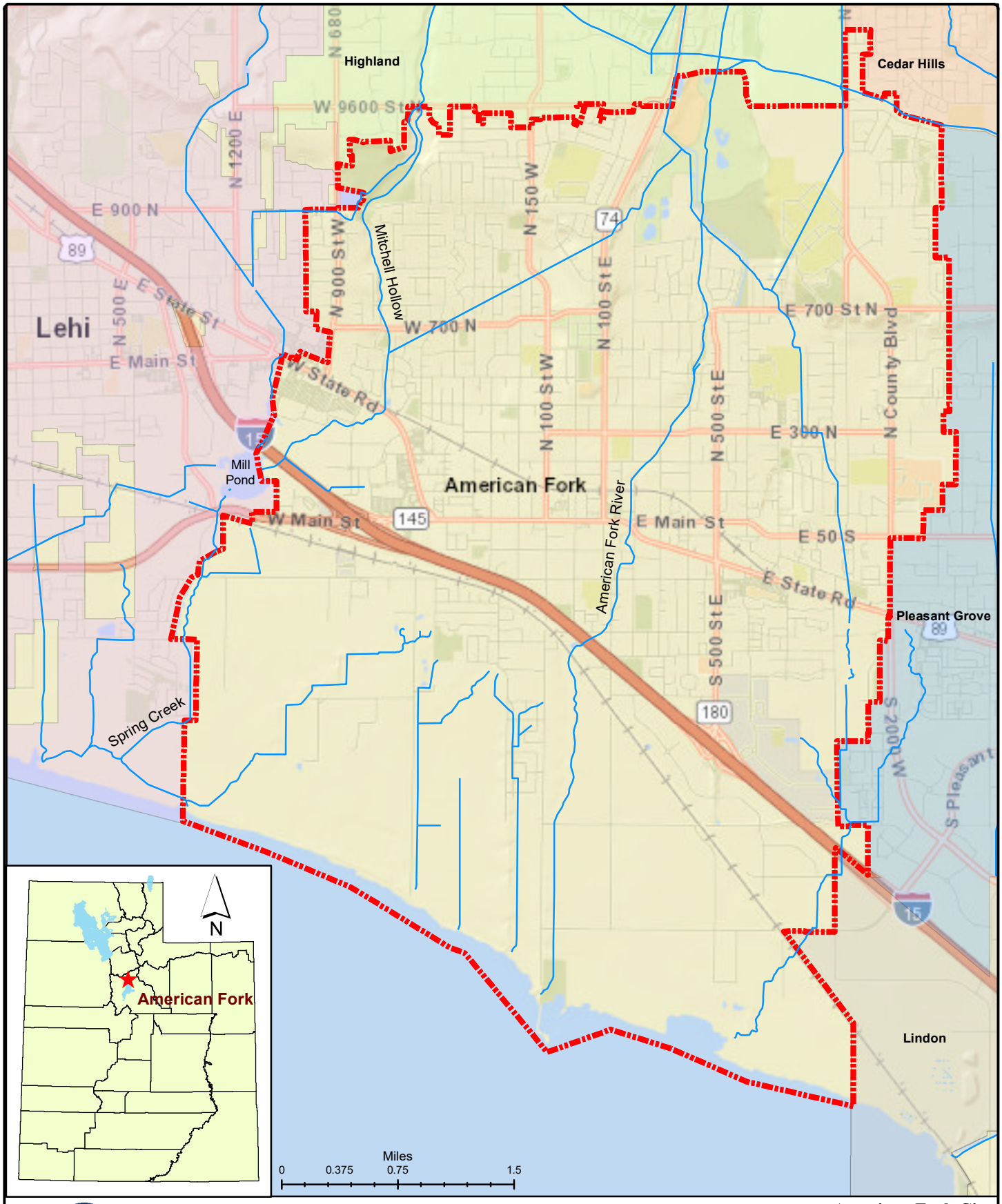
In addition to these primary documents, American Fork City has prepared several appendices to provide additional information and copies of all forms, checklists, standard operating procedures (SOPs), and other required information necessary for the implementation of all MCMs associated with this SWMP and UTR090000 compliance. These appendices include:

- **Appendix A** – Governing Permits: UPDES General Permit for Storm Water Discharges from Construction Activities No. UTRC00000 (July 2020) and UPDES General Permit for Discharges from Small MS4s No. UTR090000 (May 2021)
- **Appendix B** – City Ordinances: The most recent set of codified ordinances that govern American Fork City along with dates of adoption can be found at https://americanfork.municipalcodeonline.com/

- **Appendix C** – Contractor's Package: Information provided to contractors, developers, and residents regarding:
    - Design standards and specifications
    - Low impact development (LID) practices and requirements
    - Design and Storm Water Pollution Prevention Plan (SWPPP) review/preparation checklists.
    - Construction and post-construction BMP fact sheets
    - Construction inspection forms
    - Maintenance agreements for post-construction BMPs
- **Appendix D** – City Staff Package: Information provided to each department of the City to implement the SWMP requirements including:
    - Identification of all city-owned or operated facilities
    - SOPs to protect storm water quality
    - BMP fact sheets
    - Design checklists for City projects
    - SWPPP preparation/review checklists for City projects
    - Facility inspection forms
    - Construction inspection forms
    - Evaluation of city facilities and identification of high priority facilities
    - Floor drain maps
- **Appendix E** – Illicit Discharge Package: Information required for city staff to implement the IDDE program and to respond to an illegal or illicit discharge including:
    - Flow charts of response and responsibility with SOP references with emergency contacts
    - SOPs
    - BMP fact sheets and references to the appropriate manuals and guides
    - Checklists and inspection forms
    - Maps of the outfalls to the waters of the U.S.
    - High priority areas
- **Appendix F** – Documentation of Implementation: Copies of implementation for all MCM and permit requirements including:
    - Copies of completed inspection forms

  - Enforcement actions
  - Training schedule and logs
  - Maintenance records
  - Annual reports
  - Budgets
  - Justifications for changes

- **Appendix G** – Maps: GIS maps of American Fork City's utilities including the storm water system can be found online at https://afgis.maps.arcgis.com/home/index.html



Legend

- City Buildout Boundary
- Rivers, Ditches, & Sloughs

American Fork City

Storm Water Management Program

Figure 2-1

Location Map

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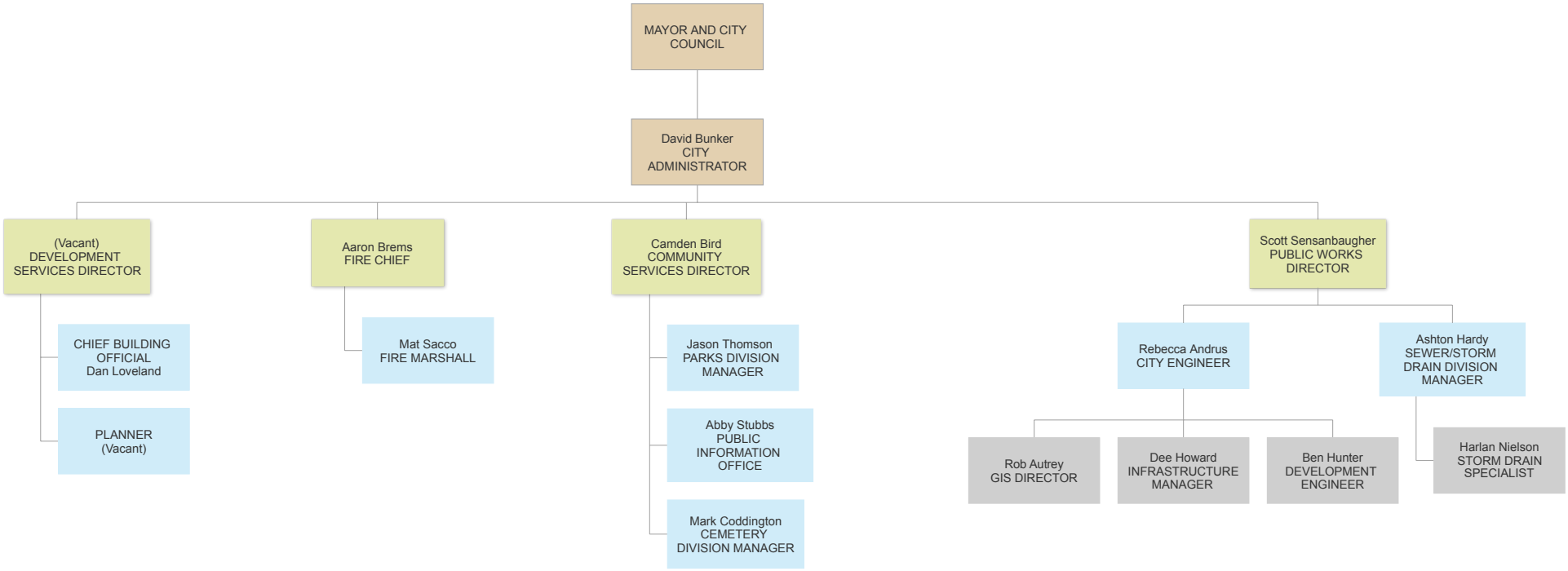

AMERICAN FORK 18 53

American Fork City

Storm Water Management Program

Figure 2-2
Organization Chart

3.0 SPECIAL CONDITIONS

3.1. Discharges to Water Quality Impaired Waters

The American Fork River runs north to south through approximately the center of the city. On the west side of town, water from Mitchell's Hollow flows through The Meadow's Wetlands and Mill Pond into Spring Creek. The American Fork River, as well as the other creeks and ditches, flow into Utah Lake.

The Utah DWQ has identified Utah Lake as impaired for both phosphorus and nitrogen. The lake commonly experiences harmful algal blooms and has been scrutinized for water quality for many years. As part of the Utah Lake Water Quality Management Plan, a detailed implementation plan is being established to reduce phosphorus and nitrogen in Utah Lake. However, as part of that plan, efforts to reduce discharges of both phosphorus and nitrogen from point sources and UPDES permit holders will be a focus.

As a result, all American Fork City BMPs have been modified to target phosphorus and nitrogen. Design standards focus on retaining the 80th percentile storm and increased use of low impact development (LID) methods to retain, infiltrate, or evaporate storm water. Other methods to treat storm water using non-structural methods have been emphasized both to reduce the City's operation and maintenance costs, reduce the cost of construction for development and residents, and improve the long-term sustainability of the overall system.

3.2. Nitrogen and Phosphorus Reduction

As part of this SWMP, American Fork City has prepared specific BMPs and efforts to reduce nitrogen and phosphorus water quality impacts, specifically targeting discharges into the American Fork River and Utah Lake. These include participation on the Utah County Storm Water Coalition and other public outreach and education practices. The City has identified and targeted key sources of these pollutants within each of the four primary classes of dischargers and have referenced the subsequent BMPs in later sections that are being applied to each targeted discharger.

American Fork City has identified several key pollutants to focus on with public education and outreach based on each key target audience. Each target audience is summarized below.

- Residents

Pollutant	Source
Nitrogen and Phosphorus	Pet wastes, fertilizers, organic wastes like lawn clippings and yard wastes
Pathogens, E. Coli, Total Coliforms	Pet wastes, septic tank maintenance or removal
Petroleum Products	Oil recycling, car wash on the grass or at a certified car wash
Toxins	Household hazardous wastes, pesticides, herbicides
Total Dissolved Solids	De-icing salts

- Institutions, Industrial, and Commercial Facilities

Pollutant	Source
Nitrogen and Phosphorus	Fertilizers, organic wastes like lawn clippings and yard wastes
Petroleum Products	Oil recycling, equipment maintenance
Toxins	Hazardous wastes storage and disposal, pesticides, herbicides
Total Dissolved Solids	De-icing salts
IDDE	Illicit Discharge Detection and Elimination

- Developers and Contractors (Construction)

Pollutant	Source
Nitrogen and Phosphorus	Fertilizers, organic wastes like lawn clippings and yard wastes
Petroleum Products	Oil recycling, refueling, equipment maintenance
Toxins	Hazardous wastes storage and disposal, concrete washout, pesticides, herbicides
Total Dissolved Solids	De-icing salts
IDDE	Illicit Discharge Detection and Elimination
Total Suspended Solids, Sediments	Erosion, dust, vehicle tracking, scouring, etc.

- MS4-Owned or Operated Facilities

Pollutant	Source
Nitrogen and Phosphorus	Pet wastes, fertilizers, organic wastes like grass clippings
Pathogens, E. Coli, Total Coliforms	Pet wastes, sanitary system overflows, etc.
Petroleum Products	Oil recycling, refueling, equipment maintenance
Toxins	Hazardous wastes storage and disposal, concrete washout, pesticides, herbicides
Total Dissolved Solids	De-icing salts, road salt
IDDE	Illicit Discharge Detection and Elimination
Total Suspended Solids, Sediments	Erosion, dust, road dust, scouring, etc.

3.3. Co-Permittees

While UDOT has a UPDES Permit which includes state-owned right-of-way within the City boundaries, American Fork City is not filing for Co-Permittee status.

4.0 STORM WATER MANAGEMENT PROGRAM

American Fork City continues to implement their existing SWMP, the intent of which is to reduce the discharge of pollutants from the MS4. American Fork City's SWMP includes BMPs for all six of the MCMs defined in the MS4 permit.

4.1. Requirements

American Fork City has compiled several BMPs for each of the six MCMs listed in the permit as well as five additional BMPs to cover administrative requirements. The City will track and document adherence to the BMPs and MCMs through work orders using asset management software.

4.2. Minimum Control Measures

1) Public Education and Outreach on Storm Water Impact

The purpose of MCM #1 is to utilize public education and outreach to target specific audiences, pollutants, and pollutant sources. These BMPs will provide information to the four designated audiences on methods for avoiding, reducing, and/or eliminating the adverse impacts of storm water discharges from pollutants common to each audience. Outreach methods will be prioritized to educate targeted sources that are likely to result in a reduction of nitrogen and phosphorus. Specific messages will be evaluated for effectiveness. This information has been provided with each BMP.

2) Public Involvement/Participation

The goal of MCM #2 is to involve the public in the implementation of the SWMP. American Fork City has established a Storm Water Advisory Committee made of representatives of the four targeted audiences. The City also provides a plethora of information on the city website and invites comment and questions from the public.

3) Illicit Discharge Detection and Elimination (IDDE)

MCM #3 includes the implementation and enforcement of an Illicit Discharge and Elimination (IDDE) program to systematically find and eliminate sources of non-storm water discharges from the MS4 and to implement defined procedures to prevent illicit connections and discharges. American Fork City's IDDE program is defined by the BMPs established for MCM #3. This program is documented in the flow charts and inspections forms, combined with the BMPs.

4) Construction Site Storm Water Runoff Control

The goal of MCM #4 is to control storm water runoff during construction. The BMPs for MCM #4 include regulatory mechanisms such as ordinances, design standards, SOPs, and Storm Water Pollution Prevention Plan. Implementation and enforcement are achieved through training and inspections. In addition to the BMPs established for MCM #4, other associated documents can be found in Appendices A, B, and C.

5) Long-Term Storm Water Management in New Development and Redevelopment (Post-Construction Storm Water Management)

The purpose of MCM #5 is to ensure that once construction is complete, measures are in place to continue to manage storm water runoff from the newly developed or redeveloped site. Again, this is achieved through ordinances, design standards, training, and inspections.

6) Pollution Prevention and Good Housekeeping for Municipal Operations

MCM #6 is intended to create a program that an MS4 can use to manage storm water runoff at their own facilities. American Fork City will set an example by inventorying and inspecting their facilities, following SOPs, and training their staff. The utilization of the BMPs, inspection forms and procedures, and high priority flow chart, with the associated SWPPPs for the high priority facilities, implement the intent of this MCM.

BMP#	MCM	BMP Description	New/Existing	Permit Reference	Status	Reason
AD 01	Administrative	Annual Planning, Establish Annual Priorities, Review Progress, Evaluate Compliance/Non-Compliance of the SWMP, and Evaluate Effectivenss	New	4.1.2	New-Added	Not covered by previous SWMP and added for clarification.
AD 02	Administrative	Review and Update Budget and Staffing Requirements	New	4.1.2.2	Ongoing-Described	Documentation of Existing Process
AD 03	Administrative	Review and Update Tracking Metrics Semiannually	New	4.1.2.1	New-Added	Not covered by previous SWMP and added for clarification.
AD 04	Administrative	Annual Report	New	5.5.1	Ongoing-Described	Documentation of Existing Process
AD 05	Administrative	Maintain Documentation for 5 years	New	5.4	Ongoing-Described	Documentation of Existing Process
PE 01	1. Public Education	Update Storm Water Residential Mailer	Existing	4.2.1.2	Ongoing	Continuing BMP
PE 02	1. Public Education	Educational Videos and Website Links	Existing	4.2.1.2, 4.2.1.3, 4.2.1.4, 4.2.1.5	Ongoing	Continuing BMP
PE 03	1. Public Education	Update Business Brochure	Existing	4.2.1.3	Ongoing	Continuing BMP
PE 04	1. Public Education	UCSWC Outreach	Existing	4.2.1.2	Ongoing	Continuing BMP
PE 05	1. Public Education	Social Media Messaging	New	4.2.1.2	Ongoing	Continuing BMP
PE 06	1. Public Education	Information to Contractors and Developers	Existing	4.2.1.4	Ongoing	Continuing BMP
PE 07	1. Public Education	Staff Training	Existing	4.2.1.5, 4.2.1.6	Ongoing	Continuing BMP
PP 01	2. Public Involvement	Storm Water Advisory Committee	Existing	4.2.2	Ongoing	Continuing BMP
PP 02	2. Public Involvement	Public Review of SWMP	Existing	4.2.2.3	Ongoing	Continuing BMP
ID 01	3. Illicit Discharge	Storm Water System Mapping	Existing	4.2.3.1	Ongoing	Continuing BMP
ID 02	3. Illicit Discharge	Update IDDE Ordinance	Existing	4.2.3.2	Ongoing	Continuing BMP
ID 03	3. Illicit Discharge	Update Assessment of High Priority Areas	Existing	4.2.3.3.1	Ongoing	Continuing BMP
ID 04	3. Illicit Discharge	Update IDDE SOPs	Existing	4.2.3.3, 4.2.3.4, 4.2.3.5, 4.2.3.6, 4.2.3.7	Ongoing	Continuing BMP
ID 05	3. Illicit Discharge	Dry Weather Screening of Outfalls	Existing	4.2.3.3.3	Ongoing	Continuing BMP
ID 06	3. Illicit Discharge	High Priority Area Inspections	Existing	4.2.3.3.2	Ongoing	Continuing BMP
ID 07	3. Illicit Discharge	Maintain 24-Hour Hotline and Update SOP for Call Response	Existing	4.2.3.9	Ongoing	Continuing BMP
ID 08	3. Illicit Discharge	Annual City Staff Training	Existing	4.2.3.11	Ongoing	Continuing BMP
ID 09	3. Illicit Discharge	Household Hazardous Waste Education	New	4.2.3.8	New-Added	Added by MS4 rather than relying on UCSWAC.
ID 10	3. Illicit Discharge	Mapping and Tracking Database Spills and Illicit Discharges Identified and Inspections Conducted	New	4.2.3.10	New-Added	Not covered by previous SWMP and added for clarification.
CS 01	4. Construction	Revise City Construction Site Ordinances	Existing	4.2.4.1, 4.2.4.1.1, 4.2.4.1.2, 4.2.4.1.3	Ongoing	Continuing BMP
CS 02	4. Construction	Revise Enforcement Strategy and Implement Provisions	Existing	4.2.4.2, 4.2.4.2.1, 4.2.4.2.2	Ongoing	Continuing BMP
CS 03	4. Construction	Revise SWPPP Review Checklist and SOP	Existing	4.2.4.3	Ongoing	Continuing BMP
CS 04	4. Construction	Update SOPs for Inspection and Enforcement	Existing	4.2.4.1, 4.2.4.2.2, 4.2.4.4	Ongoing	Continuing BMP
CS 05	4. Construction	Bi Weekly Inspection of High Priority Sites and Monthly Inspections of All Sites	Existing	4.2.4.3.2, 4.2.4.4.1, 4.2.4.4.3	Ongoing	Continuing BMP
CS 06	4. Construction	Pre-Construction SWPPP Meetings and Addressing Public Comments	Existing	4.2.4.3.1, 4.2.4.3.2	Ongoing	Continuing BMP
CS 07	4. Construction	Maintain RSI and RSW/RSR Certification Training of All Stormwater Inspectors and Engineering SWPPP Writers/Reviewers	Existing	4.2.4.4.1, 4.2.4.5	Ongoing	Continuing BMP
CS 08	4. Construction	Update Approved Construction Site Storm Water BMPs and Design Standards	Existing	4.2.4.1.1	Ongoing	Continuing BMP
CS 09	4. Construction	Maintain Documentation and Map of SWPPP Locations by Address	Existing	4.2.4.3, 4.2.4.6	Ongoing	Continuing BMP
CS 10	4. Construction	Annual Staff Training as Required	Existing	4.2.4.5	Ongoing	Continuing BMP
PC 01	5. Long-Term	Non-Structural BMPs		4.2.5.1.1	Ongoing	Continuing BMP
PC 02	5. Long-Term	Retention Requirement	Existing	4.2.5.1.2	Ongoing	Continuing BMP
PC 03	5. Long-Term	Low Impact Development Approach	New	4.2.5.1.3	New-Added	Not covered by previous SWMP and added for clarification.
PC 04	5. Long-Term	Low Impact Development Alternative	New	4.2.5.1.4	New-Added	Not covered by previous SWMP and added for clarification.
PC 05	5. Long-Term	Storm Water Control Ordinance and Enforcement	Existing	4.2.5.2, 4.2.5.2.1, 4.2.5.2.2	Ongoing	Continuing BMP
PC 06	5. Long-Term	Update Design Standards	Existing	4.2.5.2.2	Ongoing	Continuing BMP
PC 07	5. Long-Term	Inspections of Post Construction Storm Water Management	Existing	4.2.5.2.5	Ongoing	Continuing BMP
PC 08	5. Long-Term	Plan Review for Long-Term Storm Water Management	Existing	4.2.5.3	Ongoing	Continuing BMP
PC 09	5. Long-Term	Inventory of Post-Construction Structural Storm Water Control Measures	Existing	4.2.5.4	Ongoing	Continuing BMP
PC 10	5. Long-Term	Post-Constrcution Inspector Training	Existing	4.2.5.5	Ongoing	Continuing BMP
PC 11	5. Long-Term	Post-Construction Agreement and Long-Term Owner Training	Existing	4.2.5.2.3	New-Added	Not covered by previous SWMP and added for clarification of need identified by MS4.
GH 01	6. Housekeeping	City Owned Facility Inventory with Priority Identification and Possible Pollutants	Existing	4.2.6.1, 4.2.6.2	Ongoing	Continuing BMP
GH 02	6. Housekeeping	High Prioritiy Facility Pollutant Possibilities and BMPs	Existing	4.2.6.3	Ongoing	Continuing BMP
GH 03	6. Housekeeping	Prepare and Maintain High Priority Facility SWPPPs	New	4.2.6.4	Ongoing-Described	Documentation of Existing Process
GH 04	6. Housekeeping	Review and Update Existing Housekeeping SOPs	Existing	4.2.6.6, 4.2.6.6.1, 4.2.6.6.2, 4.2.6.6.3, 4.2.6.6.4, 4.2.6.6.5	Ongoing	Continuing BMP
GH 05	6. Housekeeping	Inspections - Monthly/Semi-Annually/Annually	Existing	4.2.6.5.1, 4.2.6.5.2, 4.2.6.5.3	Ongoing	Continuing BMP
GH 06	6. Housekeeping	Assessment of Flood Management Control Structures	New	4.2.6.8, 4.2.6.8.1	Ongoing-Described	Documentation of Existing Process
GH 07	6. Housekeeping	Retrofit of Existing Developed Sites that City Owns or Operates that Adversely Impacts Water Quality	New	4.2.6.9	Ongoing-Described	Documentation of Existing Process
GH 08	6. Housekeeping	Annual City Staff Training	Existing	4.2.6.10	Ongoing	Continuing BMP
GH 09	6. Housekeeping	Floor Drain Inventory	Existing	4.2.6.6.6	Ongoing	Continuing BMP

Table 4-1
BMP Summary and Status

Administrative Practices

BMP AD 01: ANNUAL PLANNING, ESTABLISH ANNUAL PRIORITIES, REVIEW PROGRESS, EVALUATE COMPLIANCE/NON-COMPLIANCE OF THE SWMP, AND EVALUATE EFFECTIVENESS

Existing: ☐ **New:** ☒

Description: American Fork City will annually hold a planning review to evaluate the compliance/non-compliance of the City with the permit and the SWMP, the effectiveness of the SWMP to meet the specified water quality goals, the progress of the City as a whole and by department, and to establish priorities for the next year.

Permit Reference: 4.1.2

Desired Results: To provide a regular review process to refocus and allow the City to best utilize its limited resources to accomplish the most good.

Justification: Regular accountability and review provides a standard process to adjust the SWMP where necessary and to better accommodate changes in the future. Additionally, this process provides a procedure to generate the information necessary to develop annual budgets and resource needs estimates.

Pollutants: All pollutants with particular emphasis on nitrogen, phosphorus, TSS, and TDS.

Audience: Public Works Director, Sewer and Storm Water Division Manager, Storm Water Advisory Committee (SWAC), City Engineer.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer.

Measurable Goal:

1) Create a standard schedule for the review of compliance based on the schedule for the annual report and the budget planning cycle.
2) Hold planning review annually and generate a summary of compliance/non-compliance of each BMP (tabular form), the effectiveness of the SWMP in meeting the years goals, and the City's goals for each department.
3) Review the results with the SWAC for inclusion in the annual report.

Measures of Success: Compliance with these goals will be measured by:

1) Create metrics and process by July 2022.
2) Hold review prior to preparation of annual report in September.
3) Report results to SWAC in October.

Milestones:

2022: Creation and approval of schedule for completion and updates of metrics by January 2022. Creation of metrics to evaluate progress and compliance by July 2022. Complete annual planning by September 2022 and report results to Storm Water Advisory Committee in October 2022.
2023: Complete annual planning and report results to SWAC by September/October 2023.
2024: Complete annual planning and report results to SWAC by September/October 2024.
2025: Complete annual planning and report results to SWAC by September/October 2025.
2026: Complete annual planning and report results to SWAC by September/October 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$3,724	$3,873	$4,028	$4,189	$4,357
Other Costs	$150	$156	$162	$169	$175
Total Costs	**$3,874**	**$4,029**	**$4,190**	**$4,358**	**$4,532**

Funding: Storm Water Utility Fund

BMP AD 02: REVIEW AND UPDATE BUDGET AND STAFFING REQUIREMENTS

Existing: ☐ **New:** ☒

Description: American Fork City will review the previous year's budget and staffing requirements compared to the planning summary and results and update the annual budget and staffing requirements.

Permit Reference: 4.1.2.2

Desired Results: To use the updated information and results to better refine budgets and resource needs to enable American Fork City to meet the requirements of the Permit.

Justification: Operation, maintenance, and capital costs are constantly changing. Additionally, as the City grows and changes, the need for resources to maintain the increased infrastructure including streets, inlet boxes, development inspects, etc. will require more resources. All these will need to be monitored and addressed appropriately.

Pollutants: All pollutants with particular emphasis on nitrogen, phosphorus, TSS, and TDS.

Audience: Public Works Director, Sewer and Storm Water Division Manager, Storm Water Advisory Committee (SWAC), City Council.

Responsible Agents in City: City Manager, Public Works Director, Sewer and Storm Water Division Manager, City Engineer.

Measurable Goal:

1) Review summary of planning report and previous years' budgets. Generate new budget including proposal for any modifications in resources.
2) Present recommendations to SWAC and City Council.

Measures of Success: Compliance with these goals will be measured by:

1) Complete preparation of proposed budget and resource requirements by January.
2) Present proposed budget to SWAC by April.
3) Present and obtain support for proposed budgets by June 30.

Milestones:

2022: Prepare proposed budget by January 2022. Present budget to SWAC by April 2022. Obtain budget approval from City council by June 2022.
2023: Prepare proposed budget by January 2023. Present budget to SWAC by April 2023. Obtain budget approval from City council by June 2023.
2024: Prepare proposed budget by January 2024. Present budget to SWAC by April 2024. Obtain budget approval from City council by June 2024.
2025: Prepare proposed budget by January 2025. Present budget to SWAC by April 2025. Obtain budget approval from City council by June 2025.

2026: Prepare proposed budget by January 2026. Present budget to SWAC by April 2026. Obtain budget approval from City council by June 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,156	$2,242	$2,332	$2,425	$2,522
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$2,156**	**$2,242**	**$2,332**	**$2,425**	**$2,522**

Funding: Storm Water Utility Fund

BMP AD 03: REVIEW AND UPDATE TRACKING METRICS SEMIANNUALLY

Existing: ☐ **New:** ☒

Description: American Fork City will review and update the tracking metrics created as part of BMP AD 01 semiannually as required in the permit.

Permit Reference: 4.1.2.1

Desired Results: To help all city departments at key inspection periods with the major good house-keeping inspections and other key milestones.

Justification: Many key inspections and compliance/non-compliance elements of this SWMP can easily be monitored and evaluated on a semiannual schedule. As a result, this BMP helps each city department remember and allocate time regularly to stay on top of the compliance.

Pollutants: All pollutants with particular emphasis on nitrogen, phosphorus, TSS, and TDS.

Audience: Public Works Director, Storm Water Advisory Committee (SWAC), City Council, General Public.

Responsible Agents in City: City Manager, Public Works Director, Sewer and Storm Water Division Manager, City Engineer.

Measurable Goal:

1) Obtain updated metrics from each department and update the metrics summaries twice annually.
2) Present the updated metrics to the SWAC and City Council twice annually.
3) Publish the metrics on the City storm water website.

Measures of Success: Compliance with these goals will be measured by:

1) Update the metrics in March and September.
2) Present the results to the SWAC and City Council in April and October.
3) Publish the results on the City storm water website in April and October.

Milestones:

2022: Update metrics in March and September 2022. Present results to SWAC, City Council, and on website in April and October 2022.

2023: Update metrics in March and September 2023. Present results to SWAC, City Council, and on website in April and October 2023.

2024: Update metrics in March and September 2024. Present results to SWAC, City Council, and on website in April and October 2024.

2025: Update metrics in March and September 2025. Present results to SWAC, City Council, and on website in April and October 2025.

2026: Update metrics in March and September 2026. Present results to SWAC, City Council, and on website in April and October 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$686	$713	$742	$772	$803
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$686**	**$713**	**$742**	**$772**	**$803**

Funding: Storm Water Utility Fund

BMP AD 04: ANNUAL REPORT

Existing: ☐ **New:** ☒

Description: American Fork City will prepare and submit an annual report to the Utah Division of Water Quality (DWQ) and post it on the City storm water web site.

Permit Reference: 5.5.1

Desired Results: To comply with the permit and to document compliance and progress to the City staff, City Council, DWQ, and the general public.

Justification: To document compliance with the SWMP.

Pollutants: All pollutants with particular emphasis on nitrogen, phosphorus, TSS, and TDS.

Audience: Public Works Director, Sewer and Storm Water Division Manager, Storm Water Advisory Committee (SWAC), City Council, Utah Division of Water Quality, General Public.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, Storm Water Inspector.

Measurable Goal:

1) Preparation, review, approval, and acceptance by those necessary in the City.
2) Submittal to the DWQ as required.

Measures of Success: Compliance with these goals will be measured by:

1) Submittal of annual report to DWQ prior to October 1 annually.

Milestones:

2022: Submittal of annual report by October 1, 2022.
2023: Submittal of annual report by October 1, 2023.
2024: Submittal of annual report by October 1, 2024.
2025: Submittal of annual report by October 1, 2025.
2026: Submittal of annual report by October 1, 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,842	$2,956	$3,074	$3,197	$3,325
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$2,842**	**$2,956**	**$3,074**	**$3,197**	**$3,325**

Funding: Storm Water Utility Fund

BMP AD 05: MAINTAIN DOCUMENTATION FOR 5 YEARS

Existing: ☐ **New:** ☒

Description: American Fork City will maintain documents for 5 years as required by the permit.

Permit Reference: 5.4

Desired Results: To create and organize a digital storage system by BMP and appendix that allows for a convenient storage and relocation of information to facilitate the preparation of metrics, annual planning, annual reports, internal audits, and DWQ audits or other requests.

Justification: Coordinating the utilization of GIS, database reporting, work orders, and .pdf printing to document progress and create digital storage that is organized and easily searched and accessed will save time and resources.

Pollutants: All pollutants with particular emphasis on nitrogen, phosphorus, TSS, and TDS.

Audience: City Engineering Staff, Sewer and Storm Water Division Staff, Public Works Director.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer, GIS Director.

Measurable Goal:

1) Creation of file data structure on the server.
2) Placement of existing data on server in the appropriate locations for past years.
3) Semi-annual maintenance of data files on computer server as part of metrics preparation.

Measures of Success: Compliance with these goals will be measured by:

1) Completion of file data structure by March 2022.
2) Completion of data population on server for past years by August 2022.
3) Semi-annual maintenance of data files completed with metrics preparation.

Milestones:

2022: File data structure completed by March. Data transferred by August.
2023: Maintenance of data files completed at same time as both metrics updates.
2024: Maintenance of data files completed at same time as both metrics updates.
2025: Maintenance of data files completed at same time as both metrics updates.
2026: Maintenance of data files completed at same time as both metrics updates.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$1,176	$1,223	$1,272	$1,323	$1,376
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$1,176**	**$1,223**	**$1,272**	**$1,323**	**$1,376**

Funding: Storm Water Utility Fund

4.2.1 Public Education and Outreach on Storm Water Impact

BMP PE 01: UPDATE STORM WATER RESIDENTIAL MAILER

Existing: ☒ **New:** ☐

Description: American Fork City will provide education to the general public through a flyer that will be included periodically with the mailing of utility billings. The flyer will address the impacts to water quality from septic system maintenance, lawn care, automotive work and car washing, swimming pool water disposal, pet waste management, and onsite storm water infiltration, as well as additional topics most relevant to the community.

Permit Reference: 4.2.1.2

Desired Results: Implement education to the public on the effects of storm water discharge and water quality and promote use of best management practices to reduce adverse effects to storm water quality.

Justification: Applicable city staff, businesses, industries, developers, contractors, and residents are the first line of defense to protect water quality. Knowledge of certain activities and practices and how they affect water quality is crucial to a successful effort to eliminate target pollutants.

Pollutants: General pollutants associated with all MCMs.

Audience: Primarily Residents, but also Businesses, Institutions, Contractors, Developers, City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Department Manager, Communications Department, Billing Department.

Measurable Goal:

1) Review and update the existing storm water flyer.
2) Include flyer in utility bill annually every spring.
3) Post flyer on City storm water website for reference.

Measures of Success:

1) Flyer will be updated and reposted to the City storm water website by April 2022.
2) Flyer will be distributed with the utility bill every April.

Milestones:

2022: Update storm water flyer and post on City website. Distribute with utility billing in April.
2023: Review/update flyer and distribute with utility billing in April.
2024: Review/update flyer and distribute with utility billing in April.
2025: Review/update flyer and distribute with utility billing in April.
2026: Review/update flyer and distribute with utility billing in April.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$539	$561	$583	$606	$631
Other Costs	$4,500	$4,680	$4,867	$5,062	$5,264
Total Costs	**$5,039**	**$5,241**	**$5,450**	**$5,668**	**$5,895**

Funding: Storm Water Utility Fund

BMP PE 02: EDUCATIONAL VIDEOS AND WEBSITE LINKS

Existing: ☒ **New:** ☐

Description: American Fork City will provide education to all target audiences through educational videos and informational website links posted on the City storm water website. The videos and information links will address the impacts to water quality from septic system maintenance, lawn care, automotive maintenance and car washing, swimming pool water disposal, pet waste management, onsite storm water infiltration, building and equipment maintenance, deicing materials, material storage and disposal, and parking lot management, as well as additional topics most relevant to the community.

Permit Reference: 4.2.1.2, 4.2.1.3, 4.2.1.4, 4.2.1.5

Desired Results: Implement education to the public on the effects of storm water discharge and water quality and promote use of best management practices to reduce adverse effects to storm water quality.

Justification: Applicable city staff, businesses, industries, developers, contractors, and residents are the first line of defense to protect water quality. Knowledge of certain activities and practices and how they affect water quality is crucial to a successful effort to eliminate target pollutants.

Pollutants: General pollutants associated with all MCMs

Audience: General Public including Residents, Businesses, Institutions, Contractors, Developers, City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, Communications Department.

Measurable Goal:

1) Review existing website content and education material.
2) Find and/or create new content and education material.
3) Include notification of new education material in City's monthly newsletter.

Measures of Success:

1) Review education material by April 2022 and create a schedule for finding/creating new videos/links.
2) Update education material by December 2022.
3) Include notification of updated City website in December 2022 newsletter.

Milestones:

2022: Update educational videos and website links. Newsletter notification.
2023: Review and update education material on City website as necessary.
2024: Review and update education material on City website as necessary.

2025: Review and update education material on City website as necessary.
2026: Review and update education material on City website as necessary.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$931	$968	$1,007	$1,047	$1,089
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$931**	**$968**	**$1,007**	**$1,047**	**$1,089**

Funding: Storm Water Utility Fund

BMP PE 03: UPDATE BUSINESS BROCHURE

Existing: ☒ **New:** ☐

Description: American Fork City will provide education to institutions, industrial, and commercial facilities through a brochure that will be distributed annually. The brochure will address the impacts to water quality from lawn maintenance, onsite storm water infiltration, building and equipment maintenance, deicing materials, material storage and disposal, and parking lot management, as well as additional topics most relevant to the community.

Permit Reference: 4.2.1.3

Desired Results: Implement education to businesses and institutions on the effects of storm water discharge and water quality and promote use of best management practices to reduce adverse effects to storm water quality.

Justification: Applicable City staff, businesses, industries, developers, contractors, and residents are the first line of defense to protect water quality. Knowledge of certain activities and practices and how they affect water quality is crucial to a successful effort to eliminate target pollutants.

Pollutants: General pollutants associated with all MCMs.

Audience: Primarily Businesses and Institutions, but also Residents, Contractors, Developers, City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, Communications Department, Business Licensing.

Measurable Goal:

1) Review and update the existing storm water brochure.
2) Distribute brochures annually every spring.
3) Post brochure on City website for reference.

Measures of Success:

1) Brochure will be updated and posted to the City website by April 2023.
2) Brochure will be distributed to licensed businesses every April.

Milestones:

2022: Distribute existing brochure to licensed businesses in April 2022.
2023: Update/distribute storm water brochure and post on City website in April 2023.
2024: Review/update and distribute brochure in April 2024.
2025: Review/update and distribute brochure in April 2025.
2026: Review/update and distribute brochure in April 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$539	$561	$583	$606	$631
Other Costs	$2,400	$2,496	$2,596	$2,700	$2,808
Total Costs	**$2,939**	**$3,057**	**$3,179**	**$3,306**	**$3,438**

Funding: Storm Water Utility Fund

BMP PE 04: UTAH COUNTY STORM WATER COALITION (UCSWC) OUTREACH

Existing: ☒ **New:** ☐

Description: American Fork City is a member of the Utah County Storm Water Coalition (UCSWC), whose purpose is to enhance public knowledge and awareness of storm water pollution and provide information to individuals and households to prevent storm water pollution and protect water quality.

Permit Reference: 4.2.1.2

Desired Results: Implement education to the public on the effects of storm water discharge and water quality and promote use of best management practices to reduce adverse effects to storm water quality.

Justification: Applicable City staff, businesses, industries, developers, contractors, and residents are the first line of defense to protect water quality. Knowledge of certain activities and practices and how they affect water quality is crucial to a successful effort to eliminate target pollutants.

Pollutants: General pollutants associated with all MCMs.

Audience: General Public including Residents, Businesses, Institutions, Contractors, Developers, City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Participate in UCSWC meetings six times per year and pay annual dues.
2) Support UCSWC in educational efforts at K-12 schools.
3) Seek opportunities to partner with UCSWC for community events, such as American Fork Steel Days.
4) Encourage UCSWC to update their website annually.

Measures of Success:

1) Track attendance at UCSWC meetings.
2) Track presentations by UCSWC to schools in American Fork City.
3) Track participation at community events.
4) Document request to UCSWC to update their website.

Milestones:

2022: Annual UCSWC participation.
2023: Annual UCSWC participation.
2024: Annual UCSWC participation.
2025: Annual UCSWC participation.
2026: Annual UCSWC participation.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$6,076	$6,319	$6,572	$6,835	$7,108
Other Costs	$5,000	$5,200	$5,408	$5,624	$5,849
Total Costs	**$11,076**	**$11,519**	**$11,980**	**$12,459**	**$12,957**

Funding: Storm Water Utility Fund

BMP PE 05: SOCIAL MEDIA MESSAGING

Existing: ☐ **New:** ☒

Description: American Fork City will use social media platforms such as Facebook, Instagram, and Twitter to provide periodic messages regarding storm water pollution prevention.

Permit Reference: 4.2.1.2

Desired Results: Implement education to the public on the effects of storm water discharge and water quality and promote use of best management practices to reduce adverse effects to storm water quality.

Justification: Applicable City staff, businesses, industries, developers, contractors, and residents are the first line of defense to protect water quality. Knowledge of certain activities and practices and how they affect water quality is crucial to a successful effort to eliminate target pollutants.

Pollutants: General pollutants associated with all MCMs.

Audience: General Public including Residents, Businesses, Institutions, Contractors, Developers, City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, Communications Department.

Measurable Goal:

1) Choose consistent storm water related topics for each month of the year.
2) Develop message for each topic.
3) Post storm water messages on social media monthly.

Measures of Success:

1) Create list of storm water related topics by July 2022.
2) Develop messages related to those topics for each month of the year.
3) Track social media response to storm water posts by noting the post insights such as likes, comments, and/or shares.

Milestones:

2022: Create topic list by July 2022. Develop and post messages for each month remaining in 2022.
2023: Review/update and post monthly social media storm water messaging.
2024: Review/update and post monthly social media storm water messaging.
2025: Review/update and post monthly social media storm water messaging.
2026: Review/update and post monthly social media storm water messaging.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$7,056	$7,338	$7,632	$7,937	$8,255
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$7,056**	**$7,338**	**$7,632**	**$7,937**	**$8,255**

Funding: Storm Water Utility Fund

BMP PE 06: INFORMATION TO CONTRACTORS AND DEVELOPERS

Existing: ☒ **New:** ☐

Description: American Fork City will provide and document education and outreach given to engineers, construction contractors, developers, development review staff, and land use planners concerning the development of storm water pollution prevention plans (SWPPPs) and BMP use, to reduce adverse impacts from storm water runoff from development sites.

Permit Reference: 4.2.1.4

Desired Results: Implement education to contractors and developers on the effects of storm water discharge and water quality and promote use of best management practices to reduce adverse effects to storm water quality.

Justification: Applicable City staff, businesses, industries, developers, contractors, and residents are the first line of defense to protect water quality. Knowledge of certain activities and practices and how they affect water quality is crucial to a successful effort to eliminate target pollutants.

Pollutants: General pollutants associated with all MCMs.

Audience: Engineers, Contractors, Developers, Development Review Staff, Land Use Planners.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, Development Review Staff.

Measurable Goal:

1) Review and update the existing information packet/slide presentation on SWPPPs and BMPs.
2) Distribute information packet to engineers, contractors, and developers for every new development/re-development at pre-construction meeting. Create a webinar for contractors to watch, then track participation electronically.
3) Post information packet/slide presentation on city website for reference.

Measures of Success:

1) Information packet/slide presentation will be updated and posted to the City website by April 2022.
2) Require engineers, contractors, and developers to return a signed acknowledgement that they have received and read the information packet. Or use web service to track participation in recorded webinar.

Milestones:

2022: Update information packet and post on website by April 2022. Distribute information and track participation for every new development.
2023: Distribute information and track participation for every new development.
2024: Distribute information and track participation for every new development.
2025: Distribute information and track participation for every new development.
2026: Distribute information and track participation for every new development.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,940	$3,058	$3,180	$3,307	$3,439
Other Costs	$1,200	$1,248	$1,298	$1,350	$1,404
Total Costs	**$4,140**	**$4,306**	**$4,478**	**$4,657**	**$4,843**

Funding: Storm Water Utility Fund

BMP PE 07: STAFF TRAINING

Existing: ☒ **New:** ☐

Description: American Fork City will provide and document education and training given to employees of city-owned or -operated facilities concerning the City's prohibition against illicit discharges and improper disposal of waste and the impacts to water quality associated with these types of discharges. The City must, at a minimum, consider the following topics: equipment inspection to ensure timely maintenance; proper storage of industrial materials (emphasize pollution prevention); proper management and disposal of wastes; proper management of dumpsters; minimization of use of salt and other de-icing materials (cover/prevent runoff to MS4 and ground water contamination); benefits of appropriate onsite infiltration (areas with low exposure to industrial materials such as roofs or employee parking); and proper maintenance of parking lot surfaces (sweeping).

City will also provide and document education and training to MS4 engineers, development and plan review staff, land use planners, and other pertinent parties about low impact development (LID) practices, green infrastructure practices, and the specific requirements for post-construction control and the associated BMPs chosen within the SWMP.

Permit Reference: 4.2.1.5, 4.2.1.6

Desired Results: Implement education to the City staff on the effects of storm water discharge and water quality and promote use of best management practices to reduce adverse effects to storm water quality.

Justification: Applicable City staff, businesses, industries, developers, contractors, and residents are the first line of defense to protect water quality. Knowledge of certain activities and practices and how they affect water quality is crucial to a successful effort to eliminate target pollutants.

Pollutants: General pollutants associated with all MCMs.

Audience: City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Conduct annual training with city staff (such as: public works, parks, cemetery, engineers, plan review staff, land use planners, fire and police departments) to familiarize staff with SOPs related to illicit discharge, waste disposal, and LID practices.

Measures of Success:

1) Conduct training every January.
2) Document attendance by staff at annual training.

Milestones:

2022: Conduct staff training every January.
2023: Conduct staff training every January.
2024: Conduct staff training every January.
2025: Conduct staff training every January.
2026: Conduct staff training every January.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$5,586	$5,809	$6,042	$6,283	$6,535
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$5,586**	**$5,809**	**$6,042**	**$6,283**	**$6,535**

Funding: Storm Water Utility Fund

4.2.2 Public Involvement/Participation

BMP PP 01: STORM WATER ADVISORY COMMITTEE

Existing: ☒ **New:** ☐

Description: Organize and maintain a storm water advisory committee chaired by a City Council member with support from stakeholders representing the key target audiences in the community including residents, contractors, businesses, and others.

Permit Reference: 4.2.2

Desired Results: To provide a regular process over the duration of the permit for public input and feedback on the 1) development, 2) implementation, and 3) reporting of the storm water management program and associated plan document.

Justification: A storm water advisory committee allows the public to become actively engaged in the preparation and implementation of the storm water management plan with regular and consistent involvement, even more so than public meetings. The committee also provides an additional contact point for concerned citizens beyond just the City Council and City staff members.

Pollutants: General pollutants associated with all MCMs.

Audience: General Public including Residents, Businesses, Institutions, Contractors, Developers, City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager.

Measurable Goal: Continue utilizing a storm water advisory committee to:

1) Review the SWMP during preparation including BMPs, SOPs, and proposed budgets three (3) times during the SWMP update process.
2) Review implementation of the SWMP twice annually.
3) Provide input to the city on the SWMP process and storm water budgets annually.

Measures of Success: Compliance with these measures on all qualifying projects

1) Meet three (3) times during SWMP update.
2) Meet every April and October to review SWMP implementation and progress.
3) Review draft annual report and proposed annual budgets every October and provide recommendations to City Council for approval.

Milestones:

2022: Meetings in April and October.
2023: Meetings in April and October.
2024: Meetings in April and October.
2025: Meetings in April and October.
2026: Meetings in April and October. Meet three times during next SWMP update.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,156	$2,242	$2,332	$2,425	$2,522
Other Costs	$500	$520	$541	$562	$585
Total Costs	**$2,656**	**$2,762**	**$2,873**	**$2,987**	**$3,107**

Funding: Storm Water Utility Fund

BMP PP 02: PUBLIC REVIEW OF SWMP

Existing: ☒ **New:** ☐

Description: Post a copy of the completed SWMP on the City website. Provide contact information (email address and phone number) for the Storm Water Advisory Committee (SWAC) member who will receive public comment on the SWMP over the duration of the permit.

Permit Reference: 4.2.2.3

Desired Results: To provide a regular process over the duration of the permit for public input and feedback on the SWMP document.

Justification: Posting the SWMP on the City website will allow the general public access to the document for review and comment.

Pollutants: General pollutants associated with all MCMs.

Audience: General Public including Residents, Businesses, Institutions, Contractors, Developers, City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, SWAC.

Measurable Goal:

1) A current version of the SWMP document shall remain available on the City website for public review and input for the life of the Permit.
2) A specific contact person on the SWAC shall be clearly identified on the City website and their phone number and/or email address shall be provided.

Measures of Success:

1) SWMP is posted on the City website within 180 days from the effective date of the Permit.
2) Contact information for the SWAC is reviewed and updated, if necessary, semiannually in conjunction with SWAC meetings in April and October.
3) If SWMP is updated during the life of the permit, an updated SWMP document will be posted on the City website and notification will be given that an update is available for review.

Milestones:

2022: Confirm and/or update contact information on City website in April and October. Post SWMP update on City website, if applicable.

2023: Confirm and/or update contact information on City website in April and October. Post SWMP update on City website, if applicable.

2024: Confirm and/or update contact information on City website in April and October. Post SWMP update on City website, if applicable.
2025: Confirm and/or update contact information on City website in April and October. Post SWMP update on City website, if applicable.
2026: Confirm and/or update contact information on City website in April and October. Post SWMP update on City website.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$147	$153	$159	$165	$172
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$147**	**$153**	**$159**	**$165**	**$172**

Funding: Storm Water Utility Fund

4.2.3 Illicit Discharge Detection and Elimination (IDDE)

BMP ID 01: STORM WATER SYSTEM MAPPING

Existing: ☒ **New:** ☐

Description: Maintain a current GIS-based map of the storm water sewer system showing the locations of all outfalls to the waters of the U.S. with layers for inlets, pipes, channels, manholes, outfalls and their associated names, detention ponds, treatment systems, rivers and streams with their associated names, and associated information on ownership.

Permit Reference: 4.2.3.1

Desired Results: To provide a GIS-based map and database that tracks outfalls and all storm water infrastructure including the outfalls and infrastructure associated with supporting the Illicit Discharge Detection and Elimination (IDDE) program.

Justification: To facilitate understanding the possible discharge locations to the waters of the U.S. and to support staff detecting, eliminating, and enforcing on all illicit or illegal non-storm water discharges.

Pollutants: Non-storm water discharges associated with illegal or illicit discharges.

Audience: City Staff.

Responsible Agents in City: City Engineer, Sewer and Storm Water Division Manager, Storm Water Inspector, Infrastructure Manager, GIS Director.

Measurable Goal: Continue updating the Storm Water Mapping by:

1) Survey in new development and as-builts prior to final sign-off by infrastructure inspectors.
2) Verify and update existing storm water mapping as part of storm water maintenance, cleaning, and regular inspections.

Measures of Success: Compliance with these goals will be measured by:

1) Complete survey of all new development annually.
2) Documentation of updates by maintenance in inspection as logged by work orders.

Milestones:

2022: Audits of survey and inspection work orders in September prior to annual report.
2023: Audits of survey and inspection work orders in September prior to annual report.
2024: Audits of survey and inspection work orders in September prior to annual report.
2025: Audits of survey and inspection work orders in September prior to annual report.
2026: Audits of survey and inspection work orders in September prior to annual report.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$45,864	$47,699	$49,607	$51,591	$53,655
Other Costs	$5,000	$5,200	$5,408	$5,624	$5,849
Total Costs	**$50,864**	**$52,899**	**$55,015**	**$57,215**	**$59,504**

Funding: Storm Water Utility Fund

BMP ID 02: UPDATE ILLICIT DISCHARGE DETECTION AND ELIMINATION ORDINANCE

Existing: ☒ **New:** ☐

Description: Update existing ordinance to prohibit non-storm water discharges including spills, illicit connections, illegal dumping, and sanitary sewer overflows into the storm water system. The ordinance will provide legal authority to detect, investigate, eliminate, and enforce against non-storm water discharges, including illegal dumping, into the American Fork MS4. (City Code 13.94.080)

Permit Reference: 4.2.3.2

Desired Results: To provide a variety of enforcement options in order to apply and escalate enforcement procedures as necessary based on the severity of violation and/or the failure of the violator to address the violation(s). To provide the adequate legal authority to detect, investigate, eliminate, and enforce against non-storm water discharges, including illegal dumping.

Justification: To provide the mechanism and tools necessary to detect and eliminate non-storm water discharges that are illegal and illicit.

Pollutants: Non-storm water discharges associated with illegal or illicit discharges.

Audience: City Staff, General Public (Residents, Businesses, Institutions, Contractors, Developers).

Responsible Agents in City: City Engineer, Sewer and Storm Water Division Manager, Storm Water Inspector, Infrastructure Manager, City Attorney.

Measurable Goal: Regularly review and update the IDDE Ordinance:

1) Review ordinance with suggestions for improvements. SWAC will review updated ordinance and make recommendation to City Council for adoption.
2) Ordinance modifications will be completed in time for the annual report.
3) Review ordinance annually for effectiveness.

Measures of Success: Compliance with these goals will be measured by:

1) Recommendations for ordinance updates provided by July 2022.
2) Ordinance modifications implemented prior to October 1, 2022 Annual Report.
3) Documentation of annual reviews as part of annual reports.

Milestones:

2022: Ordinance updates completed by October 1, 2022.
2023: Ordinance review of effectiveness completed by October 1, 2023.
2024: Ordinance review of effectiveness completed by October 1, 2024.
2025: Ordinance review of effectiveness completed by October 1, 2025.

2026: Ordinance review of effectiveness completed by October 1, 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$1,568	$1,631	$1,696	$1,764	$1,834
Other Costs	$2,400	$2,496	$2,596	$2,700	$2,808
Total Costs	**$3,968**	**$4,127**	**$4,292**	**$4,464**	**$4,642**

Funding: Storm Water Utility Fund

BMP ID 03: UPDATE ASSESSMENT OF HIGH PRIORITY AREAS

Existing: ☒ **New:** ☐

Description: Update of written standard operating procedures (SOPs) and mapping for locating and listing priority areas likely to have illicit discharges based on:

- Areas with older infrastructure with increased potential for illicit connections,
- Industrial, commercial, or mixed-use areas,
- Areas with a history of illicit discharges,
- Areas with a history of illicit dumping,
- Areas with onsite sewage disposal systems,
- Areas with older sewer lines or history of overflows or cross connections,
- Areas upstream of sensitive waterbodies, and
- Other areas the permittee determines to have increased potential for illicit discharges.

Permit Reference: 4.2.3.3.1

Desired Results: To focus inspection efforts to the locations most likely to provide the greatest reductions in illicit and illegal discharges of non-storm water discharges based on historical and available knowledge.

Justification: Focusing on high priority areas allows the City to most effectively and efficiently locate illicit discharges.

Pollutants: Non-storm water discharges associated with illegal or illicit discharges.

Audience: Storm Water Inspector, Sewer and Storm Water Division Manager, GIS Director.

Responsible Agents in City: Sewer and Storm Water Division Manager, Storm Water Inspector.

Measurable Goal: Update assessment of high priority areas by:

1) Update written prioritization methodology.
2) Update GIS map of high priority areas.

Measures of Success: Compliance with these goals will be measured by:

3) Update of SOP for prioritization methodology.
4) Update of GIS map of prioritization.
3) Review and update prioritization annually.

Milestones:

2022: Update SOP by April 2022. Update prioritization by October 2022.
2023: Review and update prioritization based upon previous years inspections by October 2023.
2024: Review and update prioritization based upon previous years inspections by October 2024.

2025: Review and update prioritization based upon previous years inspections by October 2025.
2026: Review and update prioritization based upon previous years inspections by October 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$3,332	$3,465	$3,604	$3,748	$3,898
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$3,332**	**$3,465**	**$3,604**	**$3,748**	**$3,898**

Funding: Storm Water Utility Fund

BMP ID 04: UPDATE ILLICIT DISCHARGE DETECTION AND ELIMINATION STANDARD OPERATION PROCEDURES

Existing: ☒ **New:** ☐

Description: The City will prepare and update the standard operating procedures (SOPs) for:

- The definition of high priority areas;
- Tracing the source of an illicit discharge using visual inspections, opening manholes, mobile cameras, field tests, collecting and analyzing water samples for the purpose of determining sanctions or penalties, and/or other detailed inspection procedures;
- Characterization of illicit discharges and the potential risk to the public or environment with the appropriate notification and documentation procedures;
- Elimination of illicit or illegal non-storm water discharges including notification of appropriate authorities, property owners, technical assistance where necessary, follow-up inspections, and escalating enforcement and legal action if not eliminated; and
- Notification of public employees, businesses, and the general public of hazards associated with illicit discharges or improper disposal of wastes.

Permit Reference: 4.2.3.3, 4.2.3.4, 4.2.3.5, 4.2.3.5.1, 4.2.3.6, 4.2.3.7

Desired Results: To standardize procedures between staff for both efficiency and safety.

Justification: To maintain consistency in procedures and results and to protect the public employees, businesses, general public, and the environment, it is necessary to standardize procedures.

Pollutants: Non-storm water discharges associated with illegal or illicit discharges

Audience: Storm Water Inspector, Sewer and Storm Water Division Manager, Public Works Director, City Engineer, Facilities Engineer, Fire Department, Public Works Administrative Staff.

Responsible Agents in City: Sewer and Storm Water Division Manager, Storm Water Inspector, Fire Marshall, City Engineer, Public Works Director.

Measurable Goal: Regularly review and update the IDDE SOPs:

1) Review and update SOPs as part of SWMP submittal process.
2) Review SOPs annually for effectiveness and update as necessary.

Measures of Success: Compliance with these goals will be measured by:

1) Update to SOPs for review by Storm Water Advisory Committee by October 2022.
2) Review SOPs for effectiveness and update as necessary annually before October 1 annual report.

Milestones:

2022: Review and update SOPs.

2023: Review and update SOPs.
2024: Review and update SOPs.
2025: Review and update SOPs.
2026: Review and update SOPs.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$4,116	$4,281	$4,452	$4,630	$4,815
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$4,116**	**$4,281**	**$4,452**	**$4,630**	**$4,815**

Funding: Storm Water Utility Fund

BMP ID 05: DRY WEATHER SCREENING OF OUTFALLS

Existing: ☒ **New:** ☐

Description: The City will continue to implement dry weather screening of all outfalls to the waters of the U.S., as mapped in the GIS databased completed in ID 01, using a standard inspection form created by American Fork City at least once during the 5-year permit cycle.

Permit Reference: 4.2.3.3.3

Desired Results: To identify any continuous or semi-regular discharges that are illicit or illegal non-storm water discharges and trace them back to the source and eliminate them.

Justification: Dry weather discharges reflect non-storm water discharges. The utilization of the inspection form and the SOP created by American Fork City will allow the inspector to determine if the flows are allowable discharges as identified in Permit Paragraph 1.2.2.2 or if they are illegal or illicit. This then allows the City, if necessary, to eliminate those discharges.

Pollutants: Non-storm water discharges associated with illegal or illicit discharges.

Audience: Storm Water Inspector, Sewer and Storm Water Division Manager.

Responsible Agents in City: Sewer and Storm Water Division Manager, Storm Water Inspector, Public Works Director.

Measurable Goal: Regular dry weather inspections of all outfalls within American Fork City.

1) Inspection of 20% of all outfalls annually throughout the City.
2) Return inspections on all outfalls with possible problems after tracing and corrective action within six months of initial inspection and corrective action.

Measures of Success: Compliance with these goals will be measured by:

1) Annual review of the completed dry weather screening work orders, GIS mapping of inspections, and completed inspection reports.
2) Review of inspection effectiveness and the procedures.

Milestones:

2022: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.
2023: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.
2024: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.
2025: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.

2026: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,744	$2,854	$2,968	$3,087	$3,210
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$2,744**	**$2,854**	**$2,968**	**$3,087**	**$3,210**

Funding: Storm Water Utility Fund

BMP ID 06: HIGH PRIORITY AREA INSPECTIONS

Existing: ☒ **New:** ☐

Description: The City will continue high priority inspections base on the high priority mapping completed in MCM #3 BMP ID 03 using the SOPs and inspection forms.

Permit Reference: 4.2.3.3.2

Desired Results: To inspect all high priority areas and eliminate illicit or illegal non-storm water discharges or dumping.

Justification: The high priority areas identified and updated annually are inspected to ensure that the areas most susceptible to pollution are being protected.

Pollutants: Non-storm water discharges associated with illegal or illicit discharges with particular emphasis on phosphorus and nitrogen.

Audience: Storm Water Inspector, Sewer and Storm Water Division Manager.

Responsible Agents in City: Sewer and Storm Water Division Manager, Storm Water Inspector, Public Works Director.

Measurable Goal: Regular inspections of all high priority areas in American Fork City.

1) Annual review of the completed priority inspection work orders, GIS mapping of inspections, and completed inspection reports.
2) Review of inspection effectiveness and the procedures.

Measures of Success: Compliance with these goals will be measured by:

1) Inspection of 100% of all high priority area annually throughout the City.

Milestones:

2022: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.
2023: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.
2024: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.
2025: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.
2026: Review the work orders, GIS mapping of inspections, and completed inspections reports prior to the annual reports.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,744	$2,854	$2,968	$3,087	$3,210
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$2,744**	**$2,854**	**$2,968**	**$3,087**	**$3,210**

Funding: Storm Water Utility Fund

BMP ID 07: MAINTAIN 24-HOUR HOTLINE AND UPDATE SOP FOR CALL RESPONSE

Existing: ☒ **New:** ☐

Description: The City will maintain the 24-hour-a-day hotline, web contact, and call response procedures.

Permit Reference: 4.2.3.9

Desired Results: To provide a method for the community to act as additional eyes and ears to report illegal or illicit non-storm water discharges and to act as a functional extension of the City resources.

Justification: Very few actions occur unseen by the general public. With ongoing public education, the hotline and the ability to report through the website and other multimedia options enhances the ability to further eliminate illicit discharges.

Pollutants: Non-storm water discharges associated with illegal or illicit discharges and dumping.

Audience: Storm Water Inspector, Sewer and Storm Water Division Manager.

Responsible Agents in City: Sewer and Storm Water Division Manager, Storm Water Inspector, Public Works Director, City Reception Staff.

Measurable Goal:

1) Update response flowchart and report log forms.
2) Complete report log and response form process according to the appropriate response SOP.
3) Create the appropriate work order in the GIS database logging the reported spill.

Measures of Success: Compliance with these goals will be measured by:

1) Review of response flowchart and report log forms before July 2022.
2) Review and document report logs, response forms, created and completed work orders for annual report.

Milestones:

2022: Update response flow chart and report log forms before July 2022. Review document report logs, response forms, created and completed work orders, and hotline effectiveness by the annual report.
2023: Review document report logs, response forms, created and completed work orders, and hotline effectiveness by the annual report.
2024: Review document report logs, response forms, created and completed work orders, and hotline effectiveness by the annual report.
2025: Review document report logs, response forms, created and completed work orders, and hotline effectiveness by the annual report.

2026: Review document report logs, response forms, created and completed work orders, and hotline effectiveness by the annual report.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$784	$815	$848	$882	$917
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$784**	**$815**	**$848**	**$882**	**$917**

Funding: Storm Water Utility Fund

BMP ID 08: ANNUAL CITY STAFF TRAINING

Existing: ☒ **New:** ☐

Description: Provide annual training to all City staff, contracted staff, or other responsible entities that, as part of their normal job responsibilities, might encounter or otherwise observe an illicit or illegal discharge or connection. The training shall cover the IDDE program including identification, investigation, termination, cleanup, and reporting of spills, improper disposal, and illicit connections. Provide additional training to those who may receive the reports of illicit discharges.

Permit Reference: 4.2.3.11

Desired Results: To annually prepare the City's staff, contracted staff, and other responsible entities to recognize and identify illicit discharges and connections and provide the necessary instruction to ensure the necessary termination, cleanup, and reporting of spills, improper disposals, and illicit connections.

Justification: City staff, when looked at comprehensively, cover the entirety of the City on a regular basis. This provides an excellent opportunity to screen for illicit and illegal discharges and dumping.

Pollutants: Non-storm water discharges associated with illegal or illicit discharges and dumping.

Audience: City Staff.

Responsible Agents in City: Public Works Director, City Manager, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Update of annual training program based on updated SOPs.
2) Provide annual training to all City employees and to all new employees within 60 days of hire.
3) Log all training.

Measures of Success: Compliance with these goals will be measured by:

1) Update annual training program by December 2022 for implementation in January 2023.
2) Audit training logs annually in September to verify employees have completed training as required.

Milestones:

2022: Update annual training program by December 2022.
2023: Implement training in January 2023 with a log to verify completion of training.
2024: Complete training in January 2024 with a log to verify completion of training.
2025: Complete training in January 2025 with a log to verify completion of training.

2026: Complete training in January 2026 with a log to verify completion of training.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$13,916	$14,473	$15,052	$15,654	$16,280
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$13,916**	**$14,473**	**$15,052**	**$15,654**	**$16,280**

Funding: Storm Water Utility Fund

BMP ID 09: HOUSEHOLD HAZARDOUS WASTE EDUCATION

Existing: ☐ **New:** ☒

Description: American Fork City, in coordination with the UCSWC and the City's contracted waste collection service, will promote and provide services for the collection of household hazardous waste.

Permit Reference: 4.2.3.8

Desired Results: To remind the residents to dispose of household hazardous waste appropriately.

Justification: To help educate the local community, using multimedia methods, about the proper disposal of household hazardous waste.

Pollutants: Household hazardous waste including chemicals, paints, cleaners, oils, gasolines, pesticides, herbicides, etc.

Audience: General Public (Residents, Businesses, Institutions, Contractors, Developers).

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, Storm Water Inspector, Communications Department.

Measurable Goal:

1) Create household hazardous waste disposal education outreach multimedia program.
2) Update outreach information annually and document changes.

Measures of Success: Compliance with these goals will be measured by:

1) Creation and implementation of household hazardous waste disposal education outreach information by December 2022.
2) Update outreach program by July annually.

Milestones:

2022: Create and implement household hazardous waste disposal education outreach multimedia program by December 2022.
2023: Update program by July 2023.
2024: Update program by July 2024.
2025: Update program by July 2025.
2026: Update program by July 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$1,568	$1,631	$1,696	$1,764	$1,834
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$1,568**	**$1,631**	**$1,696**	**$1,764**	**$1,834**

Funding: Storm Water Utility Fund

BMP ID 10: MAPPING AND TRACKING DATABASE OF SPILLS AND ILLICIT DISCHARGES IDENTIFIED AND INSPECTIONS CONDUCTED

Existing: ☐ **New:** ☒

Description: American Fork City will implement a database for mapping and tracking the number and type of spills or illicit discharges identified and inspections conducted. The effectiveness of the program will be evaluated annually.

Permit Reference: 4.2.3.10

Desired Results: Track and monitor the location of spills and illicit discharges and the location of inspections and also provide information that will be used to update the priority areas, SOPs, training, and mapping.

Justification: Tracking the location of spills, illicit discharges, illegal dumping, and inspections in GIS and the associated database will help the City better document where there are issues.

Pollutants: All illicit discharges and illegal dumping.

Audience: City Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, Storm Water Inspector, Fire Marshall, GIS Director.

Measurable Goal:

1) Create a spill and inspection GIS mapping and database to track the spills, discharges, and inspections.
2) Update GIS mapping and database prior to preparing the annual report.
3) Audit GIS mapping and database annually for completion.

Measures of Success: Compliance with these goals will be measured by:

1) Creation of the spill and inspection database by December 2022.
2) Documentation of annual updates.

Milestones:

2022: Create Spill and Inspection GIS mapping and database by December 2022.
2023: Update Spill and Inspection GIS mapping and database by September 2023.
2024: Update Spill and Inspection GIS mapping and database by September 2024.
2025: Update Spill and Inspection GIS mapping and database by September 2025.
2026: Update Spill and Inspection GIS mapping and database by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,352	$2,446	$2,544	$2,646	$2,752
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$2,352**	**$2,446**	**$2,544**	**$2,646**	**$2,752**

Funding: Storm Water Utility Fund

4.2.4 Construction Site Storm Water Runoff Control

BMP CS 01: REVISE CITY CONSTRUCTION SITE ORDINANCES

Existing: ☒ **New:** ☐

Description: American Fork City will review and update city ordinances and regulations to incorporate the requirements of the current permit and the updated design and construction standards.

Permit Reference: 4.2.4.1, 4.2.4.1.1, 4.2.4.1.2, 4.2.4.1.3

Desired Results: To provide the city the legal authority to direct and enforce the requirements of the permit.

Justification: By updating the ordinances to include the current permit requirements, City Staff will have the authority to implement the program and clarify the processes and city programs.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: City Engineering Staff, Sewer and Storm Water Division Staff, Contractors, Developers, Development Engineers, Architects.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer, City Attorney.

Measurable Goal:

1) Revise city ordinances to be equivalent with the requirements set forth in the most current UPDES Construction General Storm Water Permits (CGP).
2) Verify ordinances require the preparation of a SWPPP and application of sediment and erosion BMPs.
3) Verify ordinances require the construction operators to obtain coverage under the CGP by obtaining a Notice of Intent and maintaining it.
4) Verify ordinances include provisions for access by qualified personnel from the City to inspect construction storm water BMPs.

Measures of Success: Compliance with these goals will be measured by:

1) Draft of ordinance updates by September 2022 and submittal to City Council for approval.
2) Approval of modified city ordinances by October 2022.
3) Annual review of city ordinances to ensure compliance with current CGP.

Milestones:

2022: Complete draft updates by September 2022. Submit updates to City Council by October 2022.

2023: Review and update ordinances, if necessary, by April 2023.
2024: Review and update ordinances, if necessary, by April 2024.
2025: Review and update ordinances, if necessary, by April 2025.
2026: Review and update ordinances, if necessary, by April 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$1,176	$1,223	$1,272	$1,323	$1,376
Other Costs	$2,400	$2,496	$2,596	$2,700	$2,808
Total Costs	**$3,576**	**$3,719**	**$3,868**	**$4,023**	**$4,184**

Funding: Storm Water Utility Fund

BMP CS 02: REVISE ENFORCEMENT STRATEGY AND IMPLEMENT PROVISIONS

Existing: ☒ **New:** ☐

Description: American Fork City will review and update its written standard operation procedures (SOPs) for enforcement. The updates will address appropriate escalating enforcement procedures and actions, including appeals. The procedure will be published on the City website per the permit. Implementation of enforcement strategy will be documented through work orders.

Permit Reference: 4.2.4.2, 4.2.4.2.1, 4.2.4.2.2

Desired Results: To clearly document the enforcement strategy to obtain compliance and make it clear and provide information to contractors and the public on the City website. To verify documentation of implementation is compliant with permit requirements.

Justification: To provide transparency and clarity when communicating with those involved in enforcement and seeking compliance through pre-construction meetings, public education and outreach, and the City website.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: City Engineering Staff, Sewer and Storm Water Division Staff, Storm Water Inspectors, Contractors, Developers, Development Engineers, Architects, Storm Water Advisory Committee.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer, City Attorney, Communications Department.

Measurable Goal:

1) Revise enforcement SOP and written strategy.
2) Publish strategy and procedures on the storm water page of the City website.
3) Track enforcement through documentation of work orders.

Measures of Success: Compliance with these goals will be measured by:

1) Revise the SOP and strategy by October 2022.
2) Publish on the website by November 2022.
3) Annual review of enforcement SOP and strategy to ensure compliance with current CGP.
4) Compilation of documented enforcement by September annually.

Milestones:

2022: Complete the SOP and written strategy update by October 2022 and publish them by November 2022.

2023: Review and update enforcement SOP and strategy, if necessary, by April 2023. Compile enforcement documentation by September 2023.
2024: Review and update enforcement SOP and strategy, if necessary, by April 2024. Compile enforcement documentation by September 2024.
2025: Review and update enforcement SOP and strategy, if necessary, by April 2025. Compile enforcement documentation by September 2025.
2026: Review and update enforcement SOP and strategy, if necessary, by April 2026. Compile enforcement documentation by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$1,568	$1,631	$1,696	$1,764	$1,834
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$1,568**	**$1,631**	**$1,696**	**$1,764**	**$1,834**

Funding: Storm Water Utility Fund

BMP CS 03: REVISE SWPPP REVIEW CHECKLIST AND SOP

Existing: ☒ **New:** ☐

Description: American Fork City will review and update, as needed, its written SWPPP review checklist and SOP on an annual basis.

Permit Reference: 4.2.4.3

Desired Results: To ensure contractors, development engineers, and review staff follow the same procedures and have the same expectations in implementing storm water BMPs and the requirements of the UPDES CGP.

Justification: To continually streamline and improve the process and address any deficiencies in the process to ensure that the requirements of the UPDES CGP are being met. To document that the checklist and SOP are current and that they are effective. This will reflect the changes in the construction permits which are on a different renewal cycle than the MS4 Permit.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: City Engineering Staff, Storm Water Inspectors, Development Engineers, Architects.

Responsible Agents in City: Public Works Director, City Engineer.

Measurable Goal:

1) Revise checklist annually based on staff and updates in the permits.
2) Update the SWPPP review SOP annually to address changes in procedures or the construction permits.

Measures of Success: Compliance with these goals will be measured by:

1) Revise the SOP and checklist by January annually.
2) Publish on the website by February annually.

Milestones:

2022: Complete the SOP and checklist updates by January 2022 and publish on the City website by February 2022.
2023: Complete the SOP and checklist updates by January 2023 and publish on the City website by February 2023.
2024: Complete the SOP and checklist updates by January 2024 and publish on the City website by February 2024.
2025: Complete the SOP and checklist updates by January 2025 and publish on the City website by February 2025.
2026: Complete the SOP and checklist updates by January 2026 and publish on the City website by February 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$490	$510	$530	$551	$573
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$490**	**$510**	**$530**	**$551**	**$573**

Funding: Storm Water Utility Fund

BMP CS 04: UPDATE SOPs FOR INSPECTION AND ENFORCEMENT

Existing: ☒ **New:** ☐

Description: American Fork City will review and update, as needed, its written SOPs, on an annual basis, for site storm water inspections by a qualified person and enforcement.

Permit Reference: 4.2.4.1, 4.2.4.2, 4.2.4.4

Desired Results: To regularly update the procedures to ensure compliance at all construction sites with all General Construction Storm Water Permits.

Justification: As the general construction storm water permits are updated and renewed, the inspection and enforcement procedures also need to be updated to ensure compliance.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: Storm Water Inspectors.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager

Measurable Goal:

1) Update SOPs annually based on staff and updates in the permits.

Measures of Success: Compliance with these goals will be measured by:

1) Revise the SOPs by September annually.

Milestones:

2022: Complete the SOPs by September 2022.
2023: Complete the SOPs by September 2023.
2024: Complete the SOPs by September 2024.
2025: Complete the SOPs by September 2025.
2026: Complete the SOPs by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$490	$510	$530	$551	$573
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$490**	**$510**	**$530**	**$551**	**$573**

Funding: Storm Water Utility Fund

BMP CS 05: BI-WEEKLY INSPECTIONS OF HIGH PRIORITY SITES AND MONTHLY INSPECTIONS OF ALL SITES

Existing: ☒ **New:** ☐

Description: American Fork City determines if construction sites are high priority based on soil erosion potential, site slope, project size and type, sensitivity of receiving waterbodies, and non-storm water discharges and past record of non-compliance by the operators of the construction site. High priority sites will be inspected bi-weekly (once every two weeks). All other sites will be inspected monthly. Any non-compliant sites will be followed up within 7 days or less.

Permit Reference: 4.2.4.3.2, 4.2.4.4.1, 4.2.4.4.3

Desired Results: To prioritize and focus inspection efforts where the greatest benefits will be achieved while ensuring that all sites are inspected regularly.

Justification: By prioritizing the construction sites during the SWPPP and design review process as part of the approval process, limited resources can be prioritized on the areas where pollution from construction sites are most likely to occur.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: Storm Water Inspectors.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) All high-priority sites inspected bi-weekly (once every two weeks).
2) All other sites inspected once a month.
3) All compliance and corrective inspections completed within 7 days or less.

Measures of Success: Compliance with these goals will be measured by:

1) SWPPP inspection reports and work orders documenting completion of all inspections.
2) Metrics reports updated semi-annually showing that all inspections are compliant.

Milestones:

2022: Updated metrics and reports by March and September 2022.
2023: Updated metrics and reports by March and September 2023.
2024: Updated metrics and reports by March and September 2024.
2025: Updated metrics and reports by March and September 2025.
2026: Updated metrics and reports by March and September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$86,730 ,,	$90,199	$93,807	$97,559	$101,462
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$86,730**	**$90,199**	**$93,807**	**$97,559**	**$101,462**

Funding: Storm Water Utility Fund

BMP CS 06: PRE-CONSTRUCTION SWPPP MEETINGS AND ADDRESSING PUBLIC COMMENTS

Existing: ☒ **New:** ☐

Description: American Fork City will hold a pre-construction SWPPP meeting to review the site design, planned operations at the construction site, planned BMPs during construction, and long term BMPs, including LID methods, to manage runoff after construction. The City will receive public comments through the established public process associated with the planning commission.

Permit Reference: 4.2.4.3.1, 4.2.4.3.2

Desired Results: To review the priority issues and public comments that must be addressed during construction with the design professionals, developer, and contractor. This meeting will allow the City to review and discuss any priority issues associated with the BMPs and LID methods related to the construction site.

Justification: Each site is different. As a result, meeting on site to discuss the areas of concern, the installation and maintenance of BMPs, the areas to be protected from disturbance, and the contractor's sequence of work will minimize the risk of pollution to the storm water system.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: City Engineer, Sewer and Storm Water Division Manager, Storm Water Inspectors, City Infrastructure Manager, Public Works Inspectors.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Present all projects requiring a SWPPP for public comment as part of City's planning process. Comments shall be received as part of the public process.
2) Hold a pre-construction SWPPP meeting for every project meeting the requirements under the UPDES CGP.
3) Document all pre-construction meetings with an agenda and minutes.

Measures of Success: Compliance with these goals will be measured by:

1) Meeting minutes from planning commissions for each development presented or other comments received through the public process related to storm water.
2) Metrics documenting the completion of all preconstruction meetings using work orders.

Milestones:

2022: Updated metrics and meeting minutes by March and September 2022.
2023: Updated metrics and meeting minutes by March and September 2023.
2024: Updated metrics and meeting minutes by March and September 2024.
2025: Updated metrics and meeting minutes by March and September 2025.
2026: Updated metrics and meeting minutes by March and September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$39,200	$40,768	$42,399	$44,095	$45,858
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$39,200**	**$40,768**	**$42,399**	**$44,095**	**$45,858**

Funding: Storm Water Utility Fund

BMP CS 07: MAINTAIN RSI AND RSW/RSR CERTIFICATION TRAINING OF ALL STORM WATER INSPECTORS AND ENGINEERING SWPPP WRITERS/REVIEWERS

Existing: ☒ **New:** ☐

Description: Maintain RSI certification for all storm water and public works staff involved with inspections. Ensure applicable new staff obtain RSI certification within 1 year of employment. Maintain RSW/RSR certification for all storm water and engineering staff involved in writing/reviewing SWPPP and site plans. Ensure applicable new staff obtain RSW/RSR certification within 1 year of employment.

Permit Reference: 4.2.4.4.1, 4.2.4.5

Desired Results: To maintain the training and knowledge base with the current state of the industry of all City staff associated with review and inspection of storm water facilities.

Justification: By attending annual training and maintaining the certifications, staff will make all efforts to become aware of upcoming technology trends and information that will be beneficial to the city and may affect future construction, review, and permitting requirements.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: City Engineer, Sewer and Storm Water Division Manager, Storm Water Inspectors, City Infrastructure Engineer, Public Works Inspectors.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Maintain all RSI and RSW/RSR certifications.
2) Ensure all appropriate new staff obtain the necessary certifications within 1 year of employment.

Measures of Success: Compliance with these goals will be measured by:

1) Document renewal annually as part of annual metrics reporting and as part of work orders.
2) Document training of all appropriate new staff using training logs and work orders. Upon completion of training, they will receive certification that documents the completion of training.

Milestones:

2022: Updated log of certified staff by September 2022.
2023: Updated log of certified staff by September 2023.

2024: Updated log of certified staff by September 2024.
2025: Updated log of certified staff by September 2025.
2026: Updated log of certified staff by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$23,520	$24,461	$25,439	$26,457	$27,515
Other Costs	$1,250	$1,300	$1,352	$1,406	$1,462
Total Costs	**$24,770**	**$25,761**	**$26,791**	**$27,863**	**$28,977**

Funding: Storm Water Utility Fund

BMP CS 08: UPDATE APPROVED CONSTRUCTION SITE STORM WATER BMPS AND DESIGN STANDARDS

Existing: ☒ **New:** ☐

Description: American Fork City will update the approved construction site storm water BMPs and references, including the references on the engineering and storm water websites. Additionally, the City will update the engineering design standards and details on the City website to meet current permit requirements.

Permit Reference: 4.2.4.1.1

Desired Results: To standardize the design and review process, simplify design and construction efforts for those working with American Fork, and standardize the infrastructure that is maintained by the City.

Justification: Clear and consistent BMPs and design standards make it much easier for the engineers and developers working with the City to complete projects. By updating them, combined with the SWPPP checklist and design review checklist posted online, the development process for storm water compliance is consistent.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: City Engineer, Sewer and Storm Water Division Manager, City Infrastructure Manager.

Responsible Agents in City: Public Works Director, City Engineer.

Measurable Goal:

1) Update storm water construction site BMPs.
2) Update engineering design standards and details.
3) Review annually.

Measures of Success: Compliance with these goals will be measured by:

1) Update BMP reference on website annually including the date modified.
2) Document the date last reviewed and modified on the design standards and details including when they are adopted.

Milestones:

2022: Review BMP references, standards, and details by June 2022.
2023: Update BMP references, standards, and details by December 2023.
2024: Review BMP references, standards, and details by December 2024.
2025: Review BMP references, standards, and details by December 2025.
2026: Review BMP references, standards, and details by December 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$7,840	$8,154	$8,480	$8,819	$9,172
Other Costs	$0	$17,000	$17,680	$18,387	$19,123
Total Costs	**$7,840**	**$25,154**	**$26,160**	**$27,206**	**$28,295**

Funding: Storm Water Utility Fund

BMP CS 09: MAINTAIN DOCUMENTATION AND MAP OF SWPPP LOCATIONS BY ADDRESS

Existing: ☒ **New:** ☐

Description: American Fork City will document and map all SWPPP locations by address using a GIS database correlated to a digital copy of the SWPPP and each inspection and corrective action.

Permit Reference: 4.2.4.3, 4.2.4.6

Desired Results: To log and track all SWPPPs both by digital copy and by address locations using a GIS database to support and document compliance and to verify that no construction sites are missed.

Justification: The utilization of work orders, GIS database systems to log SWPPP locations, and the opportunity to correlate the SWPPPs to the individual inspections provide a strong link for providing metrics of compliance.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: City Engineer, Sewer and Storm Water Division Manager, City Infrastructure Engineer, City Storm Water Inspectors, Public Works Inspectors.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Logging of all SWPPPs in GIS database by address.
2) Metrics of all SWPPPs and associated inspections and corrective actions.

Measures of Success: Compliance with these goals will be measured by:

1) Map of all SWPPPs by year over the previous five years created annually by September of each year.
2) Metrics of all SWPPPs and associated inspections and corrective actions by March and September of each year.

Milestones:

2022: Updated metrics by March and September, and map by September 2022.
2023: Updated metrics by March and September, and map by September 2023.
2024: Updated metrics by March and September, and map by September 2024.
2025: Updated metrics by March and September, and map by September 2025.
2026: Updated metrics by March and September, and map by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$11,760	$12,230	$12,270	$13,228	$13,758
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$11,760**	**$12,230**	**$12,270**	**$13,228**	**$13,758**

Funding: Storm Water Utility Fund

BMP CS 10: ANNUAL STAFF TRAINING AS REQUIRED

Existing: ☒ **New:** ☐

Description: American Fork City will provide staff training to all staff and third-party reviewers or contractors whose job duties are related to implementing the construction storm water program. These duties include permitting, plan review, construction site inspections, and enforcement. Training will include the use of checklists, standard operating procedures (SOPs), methods for documentation, safety, and the completion a training log.

Permit Reference: 4.2.4.5

Desired Results: To provide training to all City staff associated with implementing the storm water construction program. This also allows staff to be informed and educated to proper industry methods and procedures as SOPs, standards, and permits are updated.

Justification: It is necessary to ensure that City staff are consistent in the implementation of the program. This requires annual training and the training of new staff.

Pollutants: TSS, TDS, nitrogen, phosphorus, and other related construction debris, wastes, and pollutants.

Audience: Sewer and Storm Water Division Staff, City Engineering Staff, Public Works Director.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Complete annual training of all existing engineering and storm water staff.
2) Complete the training of new staff in these divisions within 60 days of being hired.

Measures of Success: Compliance with these goals will be measured by:

1) Log of annual training of all existing employees.
2) Log of all new employees within 60 days of being hired.

Milestones:

2022: Complete annual training by April and within 60 days of hire date for new employees in 2022.
2023: Complete annual training by April and within 60 days of hire date for new employees in 2023.
2024: Complete annual training by April and within 60 days of hire date for new employees in 2024.
2025: Complete annual training by April and within 60 days of hire date for new employees in 2025.
2026: Complete annual training by April and within 60 days of hire date for new employees in 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$10,584	$11,007	$11,448	$11,906	$12,382
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$10,584**	**$11,007**	**$11,448**	**$11,906**	**$12,382**

Funding: Storm Water Utility Fund

4.2.5 Long-Term Storm Water Management in New Development and Redevelopment (Post-Construction Storm Water Management)

BMP PC 01: NON-STRUCTURAL BMPS

Existing: ☐ **New:** ☒

Description: American Fork City will consider non-structural BMPs, including requirements and standards to minimize development in areas susceptible to erosion and sediment loss; minimize the disturbance of native soils and vegetation; preserve areas that provide important water quality benefits; implement measures for flood control; and protect the integrity of natural resources and sensitive areas.

Permit Reference: 4.2.5.1.1

Desired Results: To prevent or minimize impacts to water quality by protecting sensitive areas.

Justification: Non-structural BMPs will minimize water quality impacts by protecting areas where physical controls are not suitable.

Pollutants: General pollutants associated with all MCMs with primary focus on TSS, total phosphorus, and total nitrogen.

Audience: City Staff, General Public (Residents, Businesses, Institutions, Contractors, Developers).

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Conduct planning meeting to determine how to incorporate non-structural BMPs into design standards, SOPs, and city ordinances.
2) Review and update design standards to include non-structural BMPs.
3) Review and update sensitive lands ordinances including the Shoreline Preservation Zone and Utah Lake Shoreline Protection Overlay Zone. Other sensitive lands ordinance modifications will be considered including river and stream setbacks and wetland protections.
4) Review and update Sensitive Lands application.

Measures of Success:

1) Planning meeting to establish non-structural BMP plan by April 2022.
2) Update standards, SOPs, ordinances, etc. by December 2022.
3) Review standards and ordinances annually to evaluate effectiveness of non-structural BMPs.

Milestones:

2022: Planning meeting in April 2022. Updated standards, SOPs, and ordinances by December 2022.
2023: Review standards and ordinances and evaluate effectiveness by December 2023.
2024: Review standards and ordinances and evaluate effectiveness by December 2024.
2025: Review standards and ordinances and evaluate effectiveness by December 2025.
2026: Review standards and ordinances and evaluate effectiveness by December 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$1,960	$2,038	$2,120	$2,205	$2,293
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$1,960**	**$2,038**	**$2,120**	**$2,205**	**$2,293**

Funding: Storm Water Utility Fund

BMP PC 02: RETENTION REQUIREMENT

Existing: ☒ **New:** ☐

Description: American Fork City has defined a specific hydrologic method for calculating runoff volumes and flow rates to ensure consistent sizing of structural BMPs in their jurisdiction and to facilitate plan review based on the 80th percentile storm.

Permit Reference: 4.2.5.1.2

Desired Results: Implement and enforce a program to reduce pollutants in storm water runoff to the MS4 from new development and redevelopment with a land disturbance greater than 1.0 acre, including projects less than one acre that are part of a larger common plan of development or sale after construction.

- New development projects must manage rainfall on-site and prevent the off-site discharge of the precipitation from all rainfall events less than or equal to the 80th percentile rainfall event (0.5 inches based on local rainfall analysis).
- If a redevelopment project increases the impervious surface by greater than 10%, the project shall manage rainfall on-site and prevent the off-site discharge of the net increase in the volume associated with the precipitation from all rainfall events less than or equal to the 80th percentile rainfall event.

Justification: The objective of this BMP is for the hydrology associated with new development and redevelopment to mirror pre-development hydrology of the previously undeveloped site and to improve the hydrology of a redeveloped site and reduce the discharge of storm water flows (volumes and peaks) with the focus on contaminants by the MS4. This will improve overall water quality.

Pollutants: General pollutants associated with all MCMs with primary focus on TSS, TDS, total phosphorus, and total nitrogen.

Audience: City Staff, General Public (Residents, Businesses, Institutions, Contractors, Developers).

Responsible Agents in City: Public Works Director, City Engineer, and Sewer and Storm Water Division Manager

Measurable Goal:

1) Review and update standard (in Storm Water Technical Manual) defining 80th percentile rainfall event.
2) Confirm in plan review and document that standard was followed.

Measures of Success:

1) Update Storm Water Technical Manual by December 2022.
2) Document on plan review checklist that standard was followed as verified semi-annually as part of BMP AD 03.

Milestones:

2022: Update storm water technical manual by December 2022. Document adherence to retention requirement for each plan review.
2023: Document adherence to retention requirement for each plan review.
2024: Document adherence to retention requirement for each plan review.
2025: Document adherence to retention requirement for each plan review.
2026: Document adherence to retention requirement for each plan review.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$588	$612	$636	$661	$688
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$588**	**$612**	**$636**	**$661**	**$688**

Funding: Storm Water Utility Fund

BMP PC 03: LOW IMPACT DEVELOPMENT APPROACH

Existing: ☐ **New:** ☒

Description: American Fork City shall require the evaluation of a low impact development (LID) approach for all projects subject to the requirements in the MS4 Permit. The City shall adopt a minimum of five LID practices that meet the requirements or are listed in Appendix C of the State of Utah's *A Guide to Low Impact Development within Utah*, available on DWQ's website.

Permit Reference: 4.2.5.1.3

Desired Results: The implementation of BMPs that allow storm water to infiltrate, have evapotranspiration or harvest, and use storm water on site to reduce runoff from the site and protect water quality.

Justification: A LID approach promotes storm water controls that will prevent and minimize impacts to water quality.

Pollutants: Total nitrogen, total phosphorous, TSS.

Audience: Land Use Planners, Reviewers, Engineers, Developers.

Responsible Agents in City: City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Review DWQ's guide to LID, the UCEA website (https://www.ucea.net/services), and other sources to select which LID practices are most appropriate for the City.
2) Add selected LID practices to design standards with links on the City website.
3) Utilize plan review process and annual post-construction inspections results to determine implementation and effectiveness of LID practices.

Measures of Success:

1) Select LID practices to add to design standards by January 2022.
2) Update design standards to include selected LID practices by December 2022 and post links on City website.
3) Update plan review checklist to include review of LID practices.

Milestones:

2022: Select a minimum of five LID practices by January 2022. Update design standards by December 2022. Update plan review checklist by December 2022.
2023: Use plan review checklist as documentation of LID implementation. Document reviews in semi-annual metrics associated with BMP AD 03
2024: Use plan review checklist as documentation of LID implementation. Document reviews in semi-annual metrics associated with BMP AD 03.

2025: Use plan review checklist as documentation of LID implementation. Document reviews in semi-annual metrics associated with BMP AD 03.

2026: Use plan review checklist as documentation of LID implementation. Document reviews in semi-annual metrics associated with BMP AD 03.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,058	$2,140	$2,226	$2,315	$2,408
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$2,058**	**$2,140**	**$2,226**	**$2,315**	**$2,408**

Funding: Storm Water Utility Fund

BMP PC 04: LOW IMPACT DEVELOPMENT ALTERNATIVE

Existing: ☐ **New:** ☒

Description: American Fork City shall adopt a procedure for developers to provide rationale for the use of alternative design criteria, if meeting the retention standards described in Part 4.2.5.1.2 is infeasible.

Permit Reference: 4.2.5.1.4

Desired Results: The new or redevelopment project must document and quantify that infiltration, evapotranspiration, and rainwater harvesting have been used to the maximum extent feasible and that full employment of these controls are infeasible due to constraints beyond their control.

Justification: LID practices may be infeasible due to one or more of the following conditions: high groundwater, drinking water source protection areas, soil conditions, slopes, accessibility, excessive costs, or another justifiable constraint.

Pollutants: Total nitrogen, total phosphorous, TSS, TDS.

Audience: Land Use Planners, Reviewers, Engineers, Developers.

Responsible Agents in City: City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Define procedure for developers to provide rationale and documentation that LID is infeasible.
2) Update instructions in design standards.
3) Utilize plan review process to document LID infeasibility.

Measures of Success:

1) Define LID alternative approach by January 2022.
2) Update design standards to include procedure for LID alternative approach by December 2022.
3) Update plan review checklist to include review of LID alternative approach.

Milestones:

2022: Define LID alternative approach by January 2022. Update design standards by December 2022. Update plan review checklist by December 2022.
2023: Use plan review checklist as documentation of LID infeasibility.
2024: Use plan review checklist as documentation of LID infeasibility.
2025: Use plan review checklist as documentation of LID infeasibility.
2026: Use plan review checklist as documentation of LID infeasibility.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$3,332	$3,465	$3,604	$3,748	$3,898
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$3,332**	**$3,465**	**$3,604**	**$3,748**	**$3,898**

Funding: Storm Water Utility Fund

BMP PC 05: STORM WATER CONTROL ORDINANCE AND ENFORCEMENT

Existing: ☒ **New:** ☐

Description: American Fork City shall review and update the city ordinance that requires long-term post-construction storm water controls at new development and redevelopment sites. The ordinance requires BMP selection, design, installation, operation, and maintenance standards necessary to protect water quality and reduce the discharge of pollutants to the MS4. It also includes an enforcement strategy and an appeals process.

Enforcement provisions in the ordinance contain procedures for specific processes and sanctions to minimize the occurrences of violations and obtain compliance from chronic and recalcitrant violators. These processes and sanctions include appropriate, escalating enforcement procedures and actions.

Permit Reference: 4.2.5.2, 4.2.5.2.1, 4.2.5.2.2

Desired Results: Utilization of appropriate BMPs and standards during design, installation, and operation and maintenance, along with enforcement of the ordinance, will protect water quality and reduce the discharge of pollutants to the MS4.

Justification: Properly enforced ordinances and adherence to adopted design standards will minimize adverse impacts to storm water quality.

Pollutants: Total nitrogen, total phosphorous, TSS, TDS.

Audience: Land Use Planners, Reviewers, Engineers, Developers, Storm Water Inspectors.

Responsible Agents in City: Public Works Director, City Engineer, Storm and Sewer Division Manager

Measurable Goal:

1) Review and update storm water control ordinance.
2) Review and train City staff on enforcement strategy, appeals process, and required documentation.
3) Implement enforcement strategy and BMP documentation.

Measures of Success:

1) Review, update, and adopt storm water control ordinance by October 2022.
2) Include ordinances and enforcement SOPs in annual City staff training, as described in BMP PC 10.
3) Document plan reviews and inspections as evidence of enforcement strategy.

Milestones:

2022: Update ordinance by October 2022. Continue training, inspection, and documentation.

2023: Continue training, inspection, and documentation. Include in semi-annual metrics and review.
2024: Continue training, inspection, and documentation. Include in semi-annual metrics and review.
2025: Continue training, inspection, and documentation. Include in semi-annual metrics and review.
2026: Continue training, inspection, and documentation. Include in semi-annual metrics and review.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$8,232	$8,561	$8,904	$9,260	$9,630
Other Costs	$1,200	$1,248	$1,298	$1,350	$1,404
Total Costs	**$9,432**	**$9,809**	**$10,202**	**$10,610**	**$11,034**

Funding: Storm Water Utility Fund

BMP PC 06: UPDATE DESIGN STANDARDS

Existing: ☒ **New:** ☐

Description: American Fork City will review and update their engineering design standards and details for long-term storm water control. Updated standards will be posted on City website.

American Fork City will document how the long-term storm water BMPs were selected, the pollutant removal performance expected from the selected BMPs, and the technical basis which supports the performance claims for the selected BMPs.

Permit Reference: 4.2.5.2.2

Desired Results: Utilization of appropriate BMPs and standards during design, installation, and operation and maintenance, supported with enforcement of the ordinances, will protect water quality and reduce the discharge of pollutants to the waters of the U.S.

Justification: Properly enforced ordinances and adherence to adopted design standards will minimize adverse impacts to storm water quality.

Pollutants: General pollutants associated with all MCMs with emphasis on TSS, TDS, total nitrogen, and total phosphorus.

Audience: City Staff, Contractors, Businesses, Developers.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer.

Measurable Goal:

1) Update engineering design standards and details.
2) Review annually.

Measures of Success:

1) Update standards and details by December 2022. Post on website with the date of adoption documented.
2) Update annually based on updated information and industry improvements.

Milestones:

2022: Update standards and details by December 2022.
2023: Review standards and details by December 2023.
2024: Review standards and details by December 2024.
2025: Review standards and details by December 2025.
2026: Review standards and details by December 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,744	$2,854	$2,968	$3,087	$3,210
Other Costs	$24,000	$24,960	$25,958	$26,997	$28,077
Total Costs	**$26,744**	**$27,814**	**$28,926**	**$30,084**	**$31,287**

Funding: Storm Water Utility Fund

BMP PC 07: INSPECTIONS OF POST-CONSTRUCTION STORM WATER MANAGEMENT

Existing: ☒ **New:** ☐

Description: American Fork City will update and enforce a program to reduce pollutants in storm water runoff from existing development projects by inspecting the existing facilities at least every other year to ensure proper operations and maintenance as required by ordinance and the development agreements. The city staff will perform an inspection of all water quality control facilities once every five years.

Permit Reference: 4.2.5.2.5

Desired Results: That property owners/operators maintain functionality of existing storm water controls.

Justification: By conducting periodic inspections, American Fork City will confirm that necessary maintenance is conducted to maintain functionality of storm water controls.

Pollutants: General pollutants with emphasis on TSS, TDS, total nitrogen, and total phosphorus.

Audience: City Staff, Businesses, Landowners, and Developers.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer.

Measurable Goal:

1) Ensure ordinance provides authority to require and enforce inspection at least every other year of private storm water facilities that discharge to the American Fork MS4.
2) Update and implement maintenance agreements that will require property owners of Long-Term Storm Water Management BMPs to be maintained and inspected at least every other year.
3) Continue to require non-city-owned facilities be inspected at least every other year by private property owner/operators or qualified third parties to ensure that facilities are being maintained and operated as designed. Require non-city-owned facilities be inspected at least once every 5 years by City staff.
4) Continue to require city-owned facilities be inspected by a qualified City staff member at least every other year or as necessary to maintain functionality of the control.
5) Update American Fork MS4 post-construction facility checklist to be used in all inspections, whether by City staff or by third party qualified inspector, which includes:
    a. Inspection date
    b. Name and signature of inspector
    c. Project location
    d. Description of facilities
    e. Description of storm water control measures, including quality of:
        i. Vegetation and soils
        ii. Inlet and outlet channels and structures

iii. Catch basins
iv. Spillways
v. Weirs/orifices
vi. Sediment and debris accumulation
vii. Specific maintenance issues and violations found that need to be corrected by property owner along with deadlines and re-inspection dates.

f. Update post-construction inspection SOP.

Measures of Success:

1) Update ordinance by December 2022. Send out letter reminding landowners and business owners of inspections by June annually.
2) Update maintenance agreement and post-construction SOP by December 2022.
3) Conduct inspections of non-city-owned facilities every other year or once every 5 years depending on ongoing maintenance and agreements.
4) Document inspections using checklists/work orders.

Milestones:

2022: Update ordinance by December 2022. Update maintenance agreement and SOP by December 2022. Conduct at least 20% of non-city-owned facilities and document by September 2022. Send out letter reminding landowners and businesses to complete inspections by June 2022 requiring compliance by September 2022.

2023: Conduct at least 20% of non-city-owned facilities and document by September 2023. Send out letter reminding landowners and businesses to complete inspections by June 2023 requiring compliance by September 2023.

2024: Conduct at least 20% of non-city-owned facilities and document by September 2024. Send out letter reminding landowners and businesses to complete inspections by June 2024 requiring compliance by September 2024.

2025: Conduct at least 20% of non-city-owned facilities and document by September 2025. Send out letter reminding landowners and businesses to complete inspections by June 2025 requiring compliance by September 2025.

2026: Conduct at least 20% of non-city-owned facilities and document by September 2026. Send out letter reminding landowners and businesses to complete inspections by June 2026 requiring compliance by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$4,704	$4,892	$5,088	$5,291	$5,503
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$4,704**	**$4,892**	**$5,088**	**$5,291**	**$5,503**

Funding: Storm Water Utility Fund

BMP PC 08: PLAN REVIEW FOR LONG-TERM STORM WATER MANAGEMENT

Existing: ☒ **New:** ☐

Description: American Fork City will review their design review process and update, as needed, their design checklist and SOP for design review to ensure compliance with this SWMP related to post construction BMPs.

Permit Reference: 4.2.5.3

Desired Results: To ensure long-term storm water controls are implemented to protect water quality.

Justification: Having a documented plan review process ensures consistency between City staff reviewers, development designers, and various development projects.

Pollutants: General pollutants with emphasis on TDS, TSS, total nitrogen, and total phosphorus.

Audience: City Staff, Contractors, Businesses, Developers, Landowners.

Responsible Agents in City: Public Works Director, City Engineer.

Measurable Goal:

1) Revise checklist annually, as needed.
2) Update the design review SOP annually to address changes in procedures or the construction permits.

Measures of Success:

1) Revise the SOP and checklist by November annually.
2) Publish on the website by December annually.

Milestones:

2022: Complete the SOP and checklist updates by November 2022 and publish on the City website by December 2022.
2023: Complete the SOP and checklist updates by November 2023 and publish on the City website by December 2023.
2024: Complete the SOP and checklist updates by November 2024 and publish on the City website by December 2024.
2025: Complete the SOP and checklist updates by November 2025 and publish on the City website by December 2025.
2026: Complete the SOP and checklist updates by November 2026 and publish on the City website by December 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$392	$408	$424	$441	$459
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$392**	**$408**	**$424**	**$441**	**$459**

Funding: Storm Water Utility Fund

BMP PC 09: INVENTORY OF POST-CONSTRUCTION STRUCTURAL STORM WATER CONTROL MEASURES

Existing: ☒ **New:** ☐

Description: American Fork City will maintain an inventory of all post-construction structural storm water control measures installed and implemented at new development and redeveloped sites that disturb greater than or equal to 1 acre, including projects less than 1 acre that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to 1 acre. This inventory must include both public and private sector sites located within American Fork City's service area that were developed since the date that post-construction requirements came into effect.

Permit Reference: 4.2.5.4

Desired Results: To compile and update a GIS map and database of pertinent information related to long term storm water control measures.

Justification: Keeping an inventory of post-construction structural storm water control measures in an electronic database with corresponding mapping will help American Fork City keep track of the condition and inspection of these controls to ensure that proper maintenance continues, and water quality is protected.

Pollutants: General pollutants associated with all MCMs.

Audience: City Staff, Contractors, Businesses, Developers, and Landowners

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer.

Measurable Goal:

1) Update GIS map and database as structural BMPs are implemented and as existing controls are inspected.
2) GIS database will include basic information on each project, such as project's name, owner's name and contact information, location, start/end date, etc., and specifically:
    - Short description of each storm water control measure (type, number, design or performance specifications);
    - Short description of maintenance requirements (frequency of required maintenance and inspections); and
    - Inspection information (date, findings, follow up activities, prioritization of follow-up activities, compliance status).

Measures of Success:

1) Provide quality control, inspection, verification, and update of 20% of storm water infrastructure within American Fork City annually.
2) Update infrastructure inventory with the construction of all development, redevelopment, and retrofit of storm water infrastructure.

3) Create tracking database using GIS for annual mailers and inspection results tracking system.
4) Update the SOP for implementing this BMP.

Milestones:

2022: Continue updating and verifying mapping of all storm water infrastructure.
2023: Continue updating and verifying mapping of all storm water infrastructure.
2024: Continue updating and verifying mapping of all storm water infrastructure.
2025: Continue updating and verifying mapping of all storm water infrastructure.
2026: Continue updating and verifying mapping of all storm water infrastructure.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$6,272	$6,523	$6,784	$7,055	$7,337
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$6,272**	**$6,523**	**$6,784**	**$7,055**	**$7,337**

Funding: Storm Water Utility Fund

BMP PC 10: POST-CONSTRUCTION INSPECTOR TRAINING

Existing: ☒ **New:** ☐

Description: American Fork City will provide training to all staff and third-party reviewers or contractors whose job duties are related to implementing the construction storm water program. These duties include permitting, plan review, post-construction site inspections, and enforcement. Training will include the use of checklists, standard operating procedures (SOPs), methods for documentation, safety, and the completion of a training log.

Permit Reference: 4.2.5.5

Desired Results: To provide training to all City staff associated with implementing the storm water construction program. This also allows staff to be informed and educated to proper industry methods and procedures as SOPs, standards, and permits are updated.

Justification: It is necessary to ensure that City staff are consistent in the implementation of the program. This requires annual training and the training of new staff.

Pollutants: General pollutants with emphasis on TDS, TSS, total nitrogen, and total phosphorus.

Audience: City Public Works Inspectors, Third-Party Inspectors, Engineering Staff, Sewer and Storm Water Division Staff.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer.

Measurable Goal:

1) Complete annual training of all existing engineering and storm water staff.
2) Complete the training of new staff in these divisions within 60 days of being hired.

Measures of Success: Compliance with these goals will be measured by:

1) Log of annual training of all existing employees.
2) Log of all new employees within 60 days of being hired.

Milestones:

2022: Complete annual training by April and within 60 days of hire date for new employees in 2022.
2023: Complete annual training by April and within 60 days of hire date for new employees in 2023.
2024: Complete annual training by April and within 60 days of hire date for new employees in 2024.
2025: Complete annual training by April and within 60 days of hire date for new employees in 2025.
2026: Complete annual training by April and within 60 days of hire date for new employees in 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$2,058	$2,140	$2,226	$2,315	$2,408
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$2,058**	**$2,140**	**$2,226**	**$2,315**	**$2,408**

Funding: Storm Water Utility Fund

BMP PC 11: POST-CONSTRUCTION AGREEMENT AND LONG-TERM BMP OWNER TRAINING

Existing: ☐ **New:** ☒

Description: American Fork City will create and distribute an education flyer/notice to business and landowners responsible for water quality control features part of existing development within American Fork City on an annual basis. This flyer/notice will inform them of the purpose of the infrastructure, the importance of protecting water quality, the responsibility of the businesses and landowners to inspect the facilities bi-annually, and the consequences of non-compliance.

Permit Reference: 4.2.5.2.3

Desired Results: To provide training to all owners/operators of long-term water quality infrastructure of the importance and requirements to inspect and maintain the necessary infrastructure.

Justification: Only well-maintained infrastructure will function as designed and intended.

Pollutants: General pollutants with emphasis on TDS, TSS, total nitrogen, and total phosphorus.

Audience: Businesses and landowners of developments with water quality infrastructure.

Responsible Agents in City: Public Works Director, Sewer and Storm Water Division Manager, City Engineer.

Measurable Goal:

1) Completion of flyer/notice for businesses and landowners to educate them on the need and responsibility of inspections and compliance.
2) Annual documentation of distribution.
3) Annual documentation of responses.

Measures of Success: Compliance with these goals will be measured by:

1) Documentation of the completion of the flyer/notice and the posting of a digital copy on the City website.
2) Verification of mailings annually.
3) Verification of responses and compliance annually.

Milestones:

2022: N/A
2023: Complete flyer/notice by April 2023. Flyer/notice distributed by June 2023. Response documentation by September 2023.
2024: Flyer/notice distributed by June 2024. Response documentation by September 2024.
2025: Flyer/notice distributed by June 2025. Response documentation by September 2025.
2026: Flyer/notice distributed by June 2026. Response documentation by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$4,214	$4,383	$4,558	$4,740	$4,930
Other Costs	$3,600	$3,744	$3,894	$4,050	$4,211
Total Costs	**$7,814**	**$8,127**	**$8,452**	**$8,790**	**$9,141**

Funding: Storm Water Utility Fund

4.2.6 Pollution Prevention and Good Housekeeping for Municipal Operations

BMP GH O1: CITY OWNED FACILITY INVENTORY WITH PRIORITY IDENTIFICATION AND POSSIBLE POLLUTANTS

Existing: ☒ **New:** ☐

Description: American Fork City will continue to update the inventory of facilities owned by the City, including a summary of the possible pollutants and an assessment of the risks to discharge pollutants.

Permit Reference: 4.2.6.1, 4.2.6.2

Desired Results: To maintain an assessment of the city-owned facilities and to ensure that pollutant risks are contained and appropriate BMPs are in place.

Justification: The nature of the work by the City requires the use of many facilities including many of those listed in the MS4 permit:

- Equipment storage and maintenance facilities
- Landscape maintenance facilities on municipal property
- Materials storage yard
- Pesticide and herbicide storage facilities
- Public buildings including library, police station, fire station, municipal buildings, restrooms, and other public-owned and -operated buildings.
- Public parking lots
- Public golf course maintenance facilities
- Public swimming pool maintenance facilities
- Public Works yard
- Public marina and boat launch
- Salt storage facility
- Street repair and maintenance facilities and shed sites
- Vehicle storage and maintenance yards
- Animal control facilities
- Chemical storage facilities
- Transportation hubs

Pollutants: TSS, TDS, nitrogen, phosphorus, petroleum products, and other related debris, wastes, and pollutants.

Audience: City Staff.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager, City Facilities Manager.

Measurable Goal:

1) Review inventory of facilities to verify that all facilities are mapped and included in the inventory.
2) Review list of possible pollutants at each site and the selected BMPs to contain them.

Measures of Success: Compliance with these goals will be measured by:

1) Review facility inventory map update in GIS annually including the potential pollutants and selected BMPs included in the associated database.

Milestones:

2022: Complete annual review of inventory of facilities and list of possible pollutants and selected BMPs by September 2022.
2023: Complete annual review of inventory of facilities and list of possible pollutants and selected BMPs by September 2023.
2024: Complete annual review of inventory of facilities and list of possible pollutants and selected BMPs by September 2024.
2025: Complete annual review of inventory of facilities and list of possible pollutants and selected BMPs by September 2025.
2026: Complete annual review of inventory of facilities and list of possible pollutants and selected BMPs by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$6,468	$6,727	$6,996	$7,276	$7,567
Other Costs	$500	$520	$541	$562	$585
Total Costs	**$6,968**	**$7,247**	**$7,537**	**$7,838**	**$8,152**

Funding: Storm Water Utility Fund

BMP GH 02: HIGH-PRIORITY FACILITY POLLUTANT POSSIBILITIES AND BMPS

Existing: ☒ **New:** ☐

Description: Based on the assessment completed in MCM #6 BMP GH 01, American Fork City will continue to update the inventory of high-priority facilities owned by the City including a summary of the possible pollutants and an assessment of the risks to discharge pollutants.

Permit Reference: 4.2.6.3

Desired Results: To prioritize all facilities within the City based on the following criteria as "high-priority":

- Pollutants stored at the site,
- Improperly stored materials,
- Potential pollutant generating activities performed outside,
- Proximity to fresh water and water bodies including streams, canals, rivers, ponds, lakes, springs, and wetlands,
- Potential to discharge pollutant(s) of concern to impaired water(s).

To specify BMPs at all high-priority sites and document the implementation of those BMPs.

Justification: High-priority facilities are those most likely to discharge pollutants. By regularly evaluating these facilities and the potential pollutants, combined with the associated BMPs, the risks of pollutant discharges can be reduced or eliminated.

Pollutants: TSS, TDS, nitrogen, phosphorus, petroleum products, and other related wastes and pollutants.

Audience: City operations and maintenance staff associated with the high-priority facilities.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager, City Facilities Manager.

Measurable Goal:

1) Review all high-priority facilities annually and the associated pollutants and BMPs.
2) Monitor and inspect BMPs annually to verify they are functioning.

Measures of Success: Compliance with these goals will be measured by:

1) Documentation of annual review results and associated pollutants and BMPs in GIS and the associated database.
2) Inspection reports associated with BMPs at each high-priority facility.

Milestones:

2022: Complete annual review of high-priority facilities and inspection of BMPs by September 2022.

2023: Complete annual review of high-priority facilities and inspection of BMPs by September 2023.
2024: Complete annual review of high-priority facilities and inspection of BMPs by September 2024.
2025: Complete annual review of high-priority facilities and inspection of BMPs by September 2025.
2026: Complete annual review of high-priority facilities and inspection of BMPs by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$6,174	$6,421	$6,678	$6,945	$7,223
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$6,174**	**$6,421**	**$6,678**	**$6,945**	**$7,223**

Funding: Storm Water Utility Fund

BMP GH 03:PREPARE AND MAINTAIN HIGH PRIORITY FACILITY SWPPPS

Existing: ☐ **New:** ☒

Description: Based on the assessment completed in MCM #6 BMP GH 02, American Fork City will prepare and implement a SWPPP for each high-priority facility.

Permit Reference: 4.2.6.4

Desired Results: Implement a SWPPP for each high-priority facility within 180 days of the new permit and maintain the SWPPP annually.

Justification: The SWPPP incorporates the details of the impervious surfaces, directions of flows, nature of flows, locations of structural and non-structural flows, location and names of waters that could be polluted, summary of any spills or leaks that may have occurred, location of all visual storm water monitoring points, storm water inlets and outfalls, and a unique identification code of each outfall, locations of all non-storm water discharges, and locations of run-on flows to the site from adjacent properties.

Pollutants: TSS, TDS, nitrogen, phosphorus, petroleum products, and other related wastes and pollutants.

Audience: City operations and maintenance staff associated with the high-priority facilities.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager, City Facilities Manager.

Measurable Goal:

1) Completion of SWPPP for each high-priority facility.
2) Review and update SWPPP for each high-priority facility annually by facility staff to address any modifications or alterations in operations.

Measures of Success: Compliance with these goals will be measured by:

1) Completion of the SWPPP for each facility and placing it in the Appendix.
2) Work order documentation of completion of reviews with any updates being incorporated into the existing SWPPP.

Milestones:

2021: Complete SWPPP for high-priority facilities as required by permit by November 7, 2021.
2022: Review and update SWPPP for each high-priority facility and address any modifications or alterations by October 1, 2022.
2023: Review and update SWPPP for each high-priority facility and address any modifications or alterations by October 1, 2023.
2024: Review and update SWPPP for each high-priority facility and address any modifications or alterations by October 1, 2024.

2025: Review and update SWPPP for each high-priority facility and address any modifications or alterations by October 1, 2025.

2026: Review and update SWPPP for each high-priority facility and address any modifications or alterations by October 1, 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$8,036	$8,357	$8,692	$9,039	$9,401
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$8,036**	**$8,357**	**$8,692**	**$9,039**	**$9,401**

Funding: Storm Water Utility Fund

BMP GH 04: REVIEW AND UPDATE EXISTING HOUSEKEEPING SOPS

Existing: ☒ **New:** ☐

Description: Review and update SOPs to protect water quality at each facility owned and operated by American Fork including:

- Buildings and facilities,
- Material storage areas,
- Heavy equipment storage areas and maintenance areas,
- Parks and open spaces,
- Vehicles and equipment,
- Roads, highways, and parking lots, and
- Storm water collection and conveyance system.

SOPs shall address:

- Use, storage, and disposal of chemicals
- Storage of salt, sand, gravel, landscaping materials, asphalt, and other materials
- Waste and trash management
- Cleaning, washing, painting, and maintenance activities including cleaning of maintenance equipment, building exteriors, and trash containers
- Sweeping roads and parking lots
- Proper application, storage, and disposal of fertilizer, pesticides, and herbicides and minimizing their use
- Lawn maintenance and landscaping activities including proper disposal of lawn clippings and vegetation
- Green waste deposited in the street
- Proper disposal of pest wastes
- Vehicle maintenance and repair activities including use of drip pans and absorbents under or around leaking vehicles and equipment
- Vehicle/equipment storage
- Vehicle fueling including placing fueling under cover to minimize exposure
- Road and parking lot maintenance, including pothole repair, pavement marking, sealing, and repairing
- Cold weather operations, including plowing, sanding, application of deicing compounds, and maintenance of snow disposal areas
- Right-of-way maintenance, including mowing and herbicide and pesticide application
- Municipally sponsored events such as large outdoor festivals, parades, or street fairs, and the clean-up following these events
- Regular inspection, cleaning, and repair of storm water conveyance and structural storm water controls
- Graffiti removal
- Monthly Visual Inspections
- Semi-annual comprehensive inspections
- Annual visual observations of storm water discharges

Permit Reference: 4.2.6.6, 4.2.6.6.1, 4.2.6.6.2, 4.2.6.6.3, 4.2.6.6.4, 4.2.6.6.5

Desired Results: To ensure standard operating procedures are protecting water quality and being appropriately implemented.

Justification: Standard operating procedures regularly updated based on improvements in the industry standards and accommodating modifications and alterations in operations are the best way to protect the water quality in the waters of the U.S.

Pollutants: TSS, TDS, nitrogen, phosphorus, chemicals, petroleum products, and other related wastes and pollutants.

Audience: City operations and maintenance staff associated with the high -priority facilities.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager, City Facilities Manager.

Measurable Goal:

1) Update of all SOPs related to each facility owned by the City and related to the requirements of the permit.
2) Review and update SOPs regularly based on changes in UPDES CGP, operations and maintenance at facilities, or changes in industry standards.

Measures of Success: Compliance with these goals will be measured by:

1) Review and update of all SOPs for each facility annually.

Milestones:

2022: Review and update SOPs for each facility by October 1, 2022.
2023: Review and update SOPs for each facility by October 1, 2023.
2024: Review and update SOPs for each facility by October 1, 2024.
2025: Review and update SOPs for each facility by October 1, 2025.
2026: Review and update SOPs for each facility by October 1, 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$13,524	$14,065	$14,628	$15,213	$15,821
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$13,524**	**$14,065**	**$14,628**	**$15,213**	**$15,821**

Funding: Storm Water Utility Fund

BMP GH 05: INSPECTIONS – MONTHLY/SEMI-ANNUALLY/ANNUALLY

Existing: ☒ **New:** ☐

Description: Perform monthly visual inspections, semi-annual comprehensive inspections, and annual visual observation of storm water discharges at all high-priority facilities identified as part of BMP GH 02 using SOPs created as part of BMP GH 05 using standard inspection logs for every facility and maintaining records in the SWPPP as provided in BMP AD 05.

Permit Reference: 4.2.6.5.1, 4.2.6.5.2, 4.2.6.5.3

Desired Results: Provide for the elimination of pollution discharge from city-owned facilities.

Justification: Regular inspections of facility discharges and BMPs will ensure that proper operation and maintenance and implementation of SOPs is effectively protecting water quality and eliminating the discharge of pollutants.

Pollutants: TSS, TDS, nitrogen, phosphorus, chemicals, petroleum products, and other related wastes and pollutants.

Audience: City operations and maintenance staff associated with the city-owned and -operated facilities.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager, City Facilities Manager.

Measurable Goal:

1) Monthly visual inspections of high-priority facilities and related storm water outfalls completed and documented in accordance with the developed SOPs to verify the performance of the BMPs and all other systems designed and placed to eliminate pollutant discharges.
2) Semi-annual comprehensive inspections of high-priority facilities including all storm water controls completed and documented in accordance with the developed SOPs.
3) Annual visual observation of the storm water discharges from the high-priority facilities completed and documented in accordance with the developed SOPs.

Measures of Success: Compliance with these goals will be measured by:

1) Completion of all monthly inspections by the last Friday of each month.
2) Completion of semi-annual comprehensive inspections by January and July of each year.
3) Completion of annual storm water discharge observations by September 30 of each year, weather permitting.

Milestones:

2022: Documentation of various inspections by September 2022.
2023: Documentation of various inspections by September 2023.

2024: Documentation of various inspections by September 2024.
2025: Documentation of various inspections by September 2025.
2026: Documentation of various inspections by September 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$9,212	$9,580	$9,964	$10,362	$10,777
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$9,212**	**$9,580**	**$9,964**	**$10,362**	**$10,777**

Funding: Storm Water Utility Fund

BMP GH O6: ASSESSMENT OF FLOOD MANAGEMENT CONTROL STRUCTURES

Existing: ☐ **New:** ☒

Description: American Fork City will develop and implement a process to assess the water quality impacts and the design of all new flood management structural controls within American Fork. The process will include the consideration of controls that can be used to minimize the impacts to site water quality and hydrology while still meeting project objectives. This process will be included in the SWMP Appendix. American Fork City will also include a description of the process to evaluate existing structures to determine if any modifications should be made to improve water quality. This process is also included in the SWMP Appendix.

Permit Reference: 4.2.6.8, 4.2.6.8.1

Desired Results: Provide for the elimination of pollution caused by flood control structures, particularly related to total suspended solids and erosion or through the city storm water system.

Justification: Existing structures and new structures need to be designed to pass flood flows to avoid the mobilization of sediments from erosion and scouring of channels and banks, or the movement of sediments through the storm water system.

Pollutants: TSS, TDS, nitrogen, phosphorus, chemicals, petroleum products, and other related wastes and pollutants.

Audience: City Engineering Staff, Sewer and Storm Water Division Staff.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Completion of design standards and requirements for water quality and hydrology protection of flood control structures.
2) Completion of assessment of existing flood control structures to determine the need for modification to protect water quality or hydrology.

Measures of Success: Compliance with these goals will be measured by:

1) Update of GIS mapping to include all flood control structures.
2) Updated design standards with a documented procedure for evaluating water quality and hydrology protection of both structural and non-structural controls.
3) Completed work orders and inspection reports documenting the results of the assessment of existing flood control structures and the effects on water quality and hydrology.

Milestones:

2022: Update GIS mapping by September 2022. Update design standards by October 2022.
2023: Complete work orders and inspections reports of all existing structures by October 2023.
2024: Develop conceptual modification plans for existing flood control structures by October 2024.
2025: Develop a capital improvement and budgeting plan to begin funding modifications of flood control structures by October 2025.
2026: Begin design of first year's flood control structural modifications by July 31, 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$5,880	$6,115	$6,360	$6,614	$6,879
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$5,880**	**$6,115**	**$6,360**	**$6,614**	**$6,879**

Funding: Storm Water Utility Fund

BMP GH O7: RETROFIT OF EXISTING DEVELOPED SITES THAT CITY OWNS OR OPERATES THAT ADVERSELY IMPACTS WATER QUALITY

Existing: ☐ **New:** ☒

Description: American Fork City will develop and implement a retrofit plan to address existing developed sites owned and/or operated by the City that adversely affect water quality. The retrofit plan emphasizes the utilization of infiltration, evapotranspiration, or harvesting and the use of storm water discharges. Sites needing retrofit will be mapped in GIS and prioritized based upon the proximity to waterbodies (particularly Utah Lake, which is impaired, or the American Fork River), hydrologic condition of the receiving waterbody, proximity to sensitive ecosystems or protected areas, and any site that could be enhanced by improving the storm water system.

Permit Reference: 4.2.6.9

Desired Results: To reduce the City's water quality impact on receiving waters, particularly those already impaired or those that need extra protection.

Justification: Utah Lake is impaired for dissolved oxygen, phosphorus, nitrogen, and total dissolved solids. As a result, it is a high priority to reduce any discharges that may increase pollutants that may impact the lake further. The installation of water quality treatment, particularly by applying the 80% precipitation rule upstream, will significantly reduce the pollutants entering the streams, creeks, rivers, and canals that discharge to Utah Lake.

Pollutants: TSS, TDS, nitrogen, phosphorus, chemicals, petroleum products, and other related wastes and pollutants.

Audience: City Engineering Staff, Sewer and Storm Water Division Staff.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager.

Measurable Goal:

1) Identification of existing developed sites that adversely impact water quality.
2) Completion of assessment of existing flood control structures to determine the need for modification to protect water quality or hydrology.
3) Prioritization and preparation of concepts for retrofitting the system.
4) Budgeting for conceptual retrofits over multiple years.
5) Design of retrofits and subsequent construction.

Measures of Success: Compliance with these goals will be measured by:

1) Update of GIS mapping of development areas benefiting from retrofits with a prioritization.
2) Conceptual planning of retrofits with budgetary estimates for purposes of budgeting.
3) Preparation of a capital improvement fund and budgeting plan to start the retrofit of infrastructure.

4) The design and construction of individual facilities and their removal from the GIS high-priority facility inventory.

Milestones:

2022: Update GIS mapping of areas benefiting from retrofit by September 2022.
2023: Prioritize areas to complete retrofits by September 2023.
2024: Develop conceptual modification plans for retrofits by October 2024.
2025: Develop and capital improvement and budgeting plan to begin funding retrofit by October 2025.
2026: Begin design of first year's retrofit modifications by July 31, 2026.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$9,800	$10,192	$10,600	$11,024	$11,465
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$9,800**	**$10,192**	**$10,600**	**$11,024**	**$11,465**

Funding: Storm Water Utility Fund

BMP GH 08: ANNUAL CITY STAFF TRAINING

Existing: ☒ **New:** ☐

Description: Provide annual training to all City staff, contracted staff or other responsible entities whose, as part of their normal job, responsibilities involve primary operation or maintenance job functions that are likely to impact storm water quality. Training shall address the importance of protecting water quality, permit requirements, O&M requirements, inspection procedures, ways to minimize impacts to water quality, SOPs and SWPPPs for the various facilities, and procedures for reporting water quality concerns, particularly illicit discharges.

Permit Reference: 4.2.6.10

Desired Results: To annually prepare City staff, contracted staff, and other responsible entities to implement the pollution prevention and good housekeeping program.

Justification: To provide annual and follow-up training to ensure that all City staff, including new employees, have the training and knowledge to implement the program and protect water quality.

Pollutants: TSS, TDS, nitrogen, phosphorus, chemicals, petroleum products, and other related wastes and pollutants.

Audience: City operations and maintenance staff associated with the city-owned and operated facilities.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager, City Facilities Manager.

Measurable Goal:

1) Update of annual training program based on updated SOPs.
2) Provide annual training to all City employees and to all new employees within 60 days of hire.
3) Log all training.

Measures of Success: Compliance with these goals will be measured by:

1) Update annual training program by December 2022 for implementation in January 2023.
2) Audit training logs annually in September to verify employees have completed training as required.

Milestones:

2022: Update annual training program for implementation by December 2022.
2023: Implement training in January 2023 with a log to verify completion of training.
2024: Complete training in January 2024 with a log to verify completion of training.

2025: Complete training in January 2025 with a log to verify completion of training.
2026: Complete training in January 2026 with a log to verify completion of training.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$12,544	$13,046	$13,568	$14,110	$14,675
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$12,544**	**$13,046**	**$13,568**	**$14,110**	**$14,675**

Funding: Storm Water Utility Fund

BMP GH 09: FLOOR DRAIN INVENTORY

Existing: ☒ **New:** ☐

Description: Update inventory and mapping of all floor drains in all city-owned and operated facilities and ensure that all floor drains discharge to the appropriate location.

Permit Reference: 4.2.6.6.6

Desired Results: To verify that all floor drains discharge to the appropriate location and do not create an illicit discharge.

Justification: The correct mapping of the drains, with knowledge of where they discharge, will help avoid illicit discharges.

Pollutants: TSS, TDS, nitrogen, phosphorus, chemicals, petroleum products, and other related wastes and pollutants.

Audience: City operations and maintenance staff associated with the city-owned and operated facilities.

Responsible Agents in City: Public Works Director, City Engineer, Sewer and Storm Water Division Manager, City Facilities Manager.

Measurable Goal:

1) Updated inventory and mapping of floor drains and the associated discharges.

Measures of Success: Compliance with these goals will be measured by:

1) Updated maps of the floor drains and identification of where they discharge.
2) Completed work orders of each facility verified.

Milestones:

2022: Verification of floor drain maps by October 2022.
2023: N/A.
2024: N/A.
2025: Verification of floor drain maps by January 2025.
2026: N/A.

Cost Summary:

	2022	2023	2024	2025	2026
Labor Costs	$5,096	$5,300	$5,512	$5,732	$5,962
Other Costs	$0	$0	$0	$0	$0
Total Costs	**$5,096**	**$5,300**	**$5,512**	**$5,732**	**$5,962**

Funding: Storm Water Utility Fund

4.3. Sharing Responsibility

Within the American Fork City MS4 boundary, the Utah Department of Transportation (UDOT) is responsible for the following roads:

- I-15
- US-89 (State Street)
- SR-74 (Alpine Highway – 100 E)
- SR-129 (North County Blvd.)
- SR-145 (Pioneer Crossing)
- SR-180 (500 E from I-15 to US-89)
- SR-296 (Utah State Developmental Center)

4.4. Reviewing and Updating Storm Water Management Programs

American Fork City will review the SWMP annually and will follow requirements of the permit to update the SWMP as necessary.

5.0 NARRATIVE STANDARD, MONITORING, RECORDKEEPING, AND REPORTING

5.1. Narrative Standard [N/A]

This section is not applicable.

5.2. Analytical Monitoring

American Fork City will conduct analytical monitoring should it become necessary according to the requirements of the permit. This will most likely be the result of consultation with the Utah County Health Department upon the discovery of illicit discharges resulting from dry or wet weather inspections or IDDE calls.

5.3. Non-analytical Monitoring

American Fork City will conduct non-analytical monitoring according to the requirements of the permit.

5.4. Recordkeeping

Recordkeeping is addressed in the administrative BMPs.

5.5. Reporting

Reporting is addressed in the administrative BMPs.

6.0 STANDARD PERMIT CONDITIONS

American Fork City acknowledges the standard permit condition outlined in Section 6.0 of the permit. Appropriate documents are signed, dated, and certified according to signatory requirements. The certification of the SWMP plan is provided at the front of this document.

7.0 DEFINITIONS

BMP	Best Management Practice
CGP	UPDES Construction General Storm Water Permits
DEQ	Department of Environmental Quality
DWQ	Division of Water Quality
IDDE	Illicit Discharge Detection and Elimination
LID	Low Impact Development
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
N/A	Not Applicable
NOI	Notice of Intent
NOT	Notice of Termination
RSI	Registered Storm Water Inspector
RSR	Registered SWPPP Reviewer
RSW	Registered SWPPP Writer
SOP	Standard Operating Procedure
SWAC	Storm Water Advisory Committee
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
TMDL	Total Maximum Daily Load
UCSWC	Utah County Storm Water Coalition
UDOT	Utah Department of Transportation
UPDES	Utah Pollution Discharge Elimination System

8.0 APPENDICES